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### EDITORIAL NOTES.

The *Journal of the American Medical Association* is indeed to be highly complimented upon the manner in which it has replied to the malevolent attacks upon the Association and upon the *Journal* by

**WILLIAM  
WOOD & CO.**

William Wood & Co., through their publication, the *Medical Record*. To those of us who know the far-reaching influence of the nostrum business and its direct influence upon such publications as the *Record*, as well as to those who read carefully Mr. Adams' articles in *Collier's Weekly* and his disclosures of the manner in which the Proprietary Association of America had secured full control of the press by means of the "red clause," the attacks of the *Record* and of other so-called "medical" journals upon the A. M. A. were easily explained. Nevertheless, it was a surprise to see such a house as that of William Wood & Co., which owes its success and its wealth entirely to the better class of medical men, the class that read good journals and good books, directly attacking, and in such a patently foolish way, the organization of that very class. One would have supposed that purely commercial reasons would have led William Wood & Co., no matter how much they might dislike the present campaign for simple honesty in pharmacology, to keep a discreet silence and not to attack by distorted truth or actual and "infamous libel." Heretofore the medical profession, and very largely the members of the American Medical Association, have given their support to the publishing house of William Wood & Co. Will they continue to do so?

What has this house done for the medical profession with all the money which it has accumulated from us during the past years? Has it undertaken to do even one little thing of the many good works which the American Medical Association is now doing, not alone for its members, but for the entire profession of this country? So far from undertaking to do anything for our profession, has it not gone out of its way to print slanderous abuse, untruth and misstatement about our own Association and its Board of Trustees? Is it not possible that these attacks upon our Association, in the pages of the *Medical Record*, are inspired by disappointed greed? In spite of the fact that the editor of the *Record* is ignorant, officially, that his publication has such things as advertising pages, the animus of these attacks is evidently in the fact that the illegitimate nature of many of the nostrums advertised by the *Record* is being shown up by the Association, and that consequently the day must come when all educated physicians will demand that the journals for which they pay money, shall not participate in these frauds by deriving profit from advertising them in their pages. The *Record* may think that the present fight against fraud, secrecy and dishonesty in the materia medica business is merely a transitory affair; that it will all "blow over" after a bit. It will not. Too many medical men have been educated to what some of the actual conditions of fraud and dishonesty really are to permit of the movement for honesty and truth dying out. Let William Wood & Co. take thought to itself and take heed to where it stands, lest the ground open beneath it.

A short time ago our "esteemed contemporary" of Philadelphia, *American Medicine*, casually referred to San Francisco, editorially, as "the wickedest city in the United States," and incidentally

**OUR WICKED  
SAN FRANCISCO.**

made some very unpleasant remarks about its "wickedness." And this from Philadelphia! Will *American Medicine* please be good enough to tell us wherein our former wickedness mostly lay? Was it because the people were, and thank the good Lord, still are, a pleasure loving, cheerful, high-spirited, care-free lot, taking life easily and not at all with undue seriousness, getting all the fun and the pleasure out of each day that may be wrested from it, and not bothering too much about the other fellow's business or his ancestors, so long as he is a good fellow? Or was the epithet applied because of the existence of those world-famous French restaurants, where liberty was directly, and "respectability" inversely as the altitude? Surely, from Philadelphia, "corrupt and complacent" for so many, many years, some more explicit arraignment should be vouchered for denying its own supremacy and designating poor sketched San Francisco as the "wickedest city in the land." Now, if Boston had called San Francisco such an unkind word, we might have smiled and said nothing. But Philadelphia! Ye Gods and little fishes! The heart and brain and solar plexus of the corruption of the most corrupt

State in the Union! We are constrained to believe that Philadelphia was trying to pay a compliment to our bereaved city through *American Medicine*, and let the world know that it desired to share its glory with its stricken—but not fallen—sister.

Is it so very hard to tell the truth; to be just plain, ordinary, simple honest? Is it difficult to avoid lies and deceit and trickery, when dealing with physicians? Are they of such simple mind that, forsooth, it is impossible

IS IT  
HARD?

to keep from gulling them, the temptation being so great? It would certainly seem so. Some four years ago this JOURNAL began to say things about nostrums advertised to the medical profession, and somewhat later urged upon the American Medical Association the necessity for taking some action against the rapidly increasing pest of these deadly cure-alls or sure specifics. Fortunately for our profession, and the safety of our patients, the Association has taken up the work, as you know, through its Council on Pharmacy and Chemistry. Our Publication Committee, in the early days of its existence, thought it knew something of the rottenness of the nostrum or "proprietary" business; in the light of the facts being accumulated by the Council, your Publication Committee seems to have known comparatively nothing. There seems to be hardly a single manufacturer who has not in the past, or does not now stoop to the level of dishonesty, either active or passive, in his dealings with the medical profession. Some simple mixture will be put out under a new and high sounding name, and for it most exaggerated, to say the least, claims will be made. Fooled by these false claims, or by the technology of chemical ingredients of which the physician is necessarily ignorant—and knowingly the manufacturer plays upon this lack of technical knowledge—the stuff is used by physicians when if they but knew the real truth it would have no consideration. What the Council of Pharmacy and Chemistry, what the American Medical Association, what every thinking physician wants, is merely honesty of the homely or "garden" variety. Just plain ordinary truth about the things which we are asked to use and prescribe, and the properties and virtues of these things. Is that asking too much? Is the Association, or its Council, asking too much of the pharmaceutical manufacturers of this country when it asks for the plain, simple truth? Will it pay any manufacturer, in view of the serious manner in which the Association has taken up the work, and will continue it, longer to follow the practices of dishonesty, concealment, fraud and misstatement? Gentlemen, it is all up to you. Will you follow the work of the Council—a work intended solely for your own betterment and your own help—and will you see to it that such frauds as are disclosed by the Council never more receive recognition from you?

Remember our new address, 2210 Jackson Street, San Francisco.

For instance, it is quite probable that you will not find in the approved list of "new and non-official remedies," that deliciously fraudulent and wonderful preparation, "satyria." Why?

A SINGLE ILLUSTRATION. Well, if the manufacturer ever sends you one of the old pamphlets advertising this stuff, you will find therein something like this:

"Impotency due to any cause whatever, be it orchitis, epididymitis, former gonorrhea, the result of onanism or masturbation, senility or overindulgence, is eliminated by satyria. It is of equal value in gynecologic practice. When the ovaries undergo atrophy and ovulation ceases to be accomplished, with the usual accompaniment of sterility, satyria brings about a restoration of the lost function. In addition to this it prevents further uterine atrophy and in a comparatively short time the uterus regains its former size and physical as well as physiological capacity."

This is almost as interesting and quite as true as the fairy stories about spontaneous generation of life. The next step would naturally be the claim that a little satyria, energetically rubbed into the skin of a dead person would not only restore him to life, but would make a young live man out of an old dead one. We do not believe that there is a physician in the State of California so densely ignorant as to believe this sort of rot, but that there must be some medical men in the country who do believe it, is evidenced by the fact that the "manufacturers" continue to make the stuff and to advertise it.

It is with no small degree of pleasure that we note that the *Texas State Journal of Medicine*, the official journal of the Texas State Medical Society, has taken up a very energetic campaign against the

TEXAS ON  
INSURANCE.

rate fee for life insurance examinations. The claim is being made by the companies that, because of the recent insurance exposures, and consequent legislation, cutting down the amount which may be expended to secure new business—what is called the "expense loading"—they cannot afford to pay more than \$3.00 for a medical examination for a policy of \$1,000.00. Let it be granted that, for the sake of argument, this is true. Then it would naturally follow that the company could afford a fee of \$6.00 for a \$2,000.00 policy; a fee of \$9.00 for a \$3,000.00 policy; a fee of \$12.00 for a \$4,000 policy, etc. This is figuring on the basis which the companies themselves have advanced—an expense loading for medical examination of \$3.00 per thousand. But has any one heard the slightest hint of a whisper from the companies that they would pay such fees—fees which the expense loading permits and which even the new and much required legislation does not interfere with? If any such there be, we should much like to have his name and address. Not at all. You are just a poor doctor, glad to get

even the pittance which the official with the princely salary will deign to allow you. If you show a little independence, why the company can get some one else to do the work, and gladly. In this game of death insurance everything seems to have been forgotten except how to get the most money to gamble with and to pay enormous salaries to exalted officials. We published a letter from the medical director of one of the companies, some months ago, in which he said: "If the doctors will not make examination for this (\$3.00) fee, we will get some one else who will." Certainly. Nice safe company for one to insure in. All that's wanted is new business, whether good healthy risks or not. Who cares, so long as that \$2.00 is saved from the examiner's fee and given to the president to juggle with. It would seem that a little more honesty injected into the management of life insurance companies might not do any harm.

From time to time inquiry is made at the office of the Society either for available locations or for men to take such openings. It is a pleasure to be of assistance in these matters and we trust that no one will ever think it

#### AVAILABLE LOCATIONS.

a trouble or a bother to the Secretary to give his aid whenever possible. Just at the present time there are two or three openings which the right man might secure and develop into good locations. If you happen to want a place to settle in, or if you wish to change your location, or if you desire to secure some one to take your place, either temporarily or permanently, just let us know. Make the office of the society a sort of clearing house for medical information of all sorts, and let this be one of the "sorts." One place which we have in mind would seem to be an excellent location for a well qualified man who desires to devote himself largely to surgery. Another offers a good opening to a man who would like to do a general country practice, with a fair share of surgery, and who has a small amount of capital—a very few hundred dollars—to invest in the present equipment. If the Secretary can serve you in any of these ways, do not hesitate to call upon him for his assistance.

No one who practices medicine, and especially no one who does much fracture work, but dreads, sooner or later, the affliction of the blackmailing malpractice suit. McCormack has said that nine times out of ten some jealous or disgruntled fellow practitioner may be found behind such suits, backing up the plaintiff, if not indeed inspiring him to sue. This is probably true, and the remedy he suggests is ideal; closer and more friendly relations between the members of our profession and more perfect and harmonious organization. Indeed this remedy of organization is no mere theory, for in Pennsylvania and New York, malpractice suits have come to be almost unknown, simply because they are investi-

gated and defended by the medical organizations in those states. These facts being in mind, a little book entitled "How to Suppress a Malpractice Suit," by Thomas Hall Shastid, M. D., which reached us a short time ago, produces a distinct shock. The author seems to think that practically every malpractice suit is backed by some jealous physician, and the method for suppression which he suggests is truly kind, upright, fair, charitable and honest. It is merely this: Find out who the physician behind the plaintiff is, then find out something derogatory to him, and blackmail him into withdrawing his support. If he is, or if you can make him appear to be the unfortunate victim of some habit, let him know that you will disclose your knowledge unless he withdraws from the support of the plaintiff. Or find some disgruntled patient of the physician, and induce him, in turn, to bring a suit against the other physician. If you cannot locate any physician back of the plaintiff, try and find out whether the patient suing has syphilis; if so, and you let the jury know it at the right time, your case is won, because of the general disgust for those afflicted with this loathsome disease! Nice Christian doctrine? Not one word of more friendly relations between physicians; not a hint of the value of close organization and of concerted and friendly action; not one suggestion that is not for trickery and for stirring up more strife, bitterness and ill feeling in a profession where such sensations are only too common at best! As a contrast to this disgusting preachment, turn to Howard Kelly's life of Walter Reed. It is an inspiration. Seldom has a book come into our hands which was read with greater interest, or the reading of which left a better "taste in the mouth." It may seem, as one passes through the years of hard and unappreciated work, that such work merely for one's own mental betterment, is hardly worth while. Yet the day will come for each one of us in his own way, when the result of that work will appear in the readiness to grasp the opportunity and to do the thing that would be beyond our doing, but for the years of hard grind. It is difficult to avoid an expression of personal obligation to Dr. Kelly for presenting to our profession in such a grateful fashion the life of Walter Reed. By all means read it; you will feel the better for having done so, and you will work the better.

From all accounts, the unchecked riot of crime, of "hold up" and robbery, of looting and murdering in San Francisco gets worse rather than better as the weeks go by. It has come to pass that to be on the streets after dark is to court robbery or worse, and to visit certain sections of the city at night is almost to insure this welcome. To physicians, especially, such a condition of things is a constant menace, for the physician may be called at any time to any part of the city. Already at least one of our San Francisco brothers has been "held up," and another barely missed that distressing experi-

#### SAN FRANCISCO PHYSICIANS.



ence. And all this because of a grafting city administration and a venal police force. The veriest tyro of an observer knows that it is perfectly possible for the police of any city practically to suppress crime within its territory, if it really means to. Probably nine-tenths of the criminals in San Francisco could be rounded up by the police in forty-eight hours, or less, if there was any desire on the part of the police heads to do so. And yet the "distinguished citizen" is as silent as the "prominent merchant," and the average voter goes on about his business, paying but little attention to the crime about him. We have rather been expecting to see the medical profession of San Francisco, through their Medical Society, take some recognition of the danger to themselves from this condition of promiscuous and unrestrained crime, but as yet they seem to have been silent. The medical profession can wield a tremendous influence in any community if its members but decide to do so, and we would most respectfully suggest to the County Medical Society of that stricken community that some steps be taken to bring the urgent necessity for stopping the progress of unlimited crime, and the consequent danger to life and safety which now confronts every one of its members when he is called out at night, to the attention of the authorities. The police of San Francisco are directly responsible for every merchant who is killed, every citizen who is held up and robbed or beaten, every new home of vice that opens its doors in a decent neighborhood and casts infamy in the faces of respectable and virtuous women and girls. It is the duty of every self-respecting citizen to raise his voice in protest and to exert every bit of his influence to see that the police do that for which they are paid rather than continue a criminal partnership with criminals.

During the nearly four years of its existence, your JOURNAL has, almost without exception, refrained from printing articles which have appeared in other medical publications. Nearly all of its matter has been original and, in passing, and without undue egotism, we may say that the original articles contributed by the physicians of this State for their JOURNAL compare very favorably with the general run of articles in the better class of medical publications, and far exceed in quality most of the matter appearing in the smaller monthlies. The *Journal of the American Medical Association* has, however, recently published some papers by men of national reputation, on the subject of the proprietary medicine question from various aspects. These articles have seemed to us so good that we have taken the liberty of reprinting some of them and in due course will reprint others. It can scarcely be disputed with any hope for successful contention, that the gross abuses that have come upon and into the medical profession through the greed of unscrupulous manufacturers, real or so-called, have been directly the result of our ignorance of many of those things which it is not

only our right but our duty that we should know. In other words, the correction of the nostrum and proprietary medicine evils will follow upon and be due to proper education of ourselves. To secure this improvement, this education, it will be necessary to state, and restate and reiterate various facts, and to put them first in one form and then in another. We mortals forget very quickly. Also, many of us are pretty busy and a journal may come to hand at a time when it cannot be read; it is put aside and perhaps forgotten, so that the message which it contained did not reach the intended reader. At another time circumstances will be such as to permit him to go through his journals carefully, and then is the time when the message should be ready for his reading. This is not mentioned as an excuse, but rather as an explanation why it has seemed well to your Publication Committee to keep constantly presenting, in the pages of your JOURNAL, matter relating to the proprietary abuse. We trust that this course has found favor with you; we are grateful to know that it has met with the approval of a very large percentage of our members. These articles reprinted from the *Journal A. M. A.* are especially commended to your careful attention, as they represent the result of the conscientious study of this problem by some of the best thinkers in the country. "Read, mark, learn and inwardly digest"—and then cease from having anything to do with the horde of worthless "truck."

#### THE MEDICAL RECORD: AN ENEMY OF THE AMERICAN MEDICAL ASSOCIATION.

(From the *Journal A. M. A.*, Sept. 15, 1906.)

For many years the New York *Medical Record* was the leading medical weekly in America. Next to the *American Journal of the Medical Sciences*, it represented, better than any other journal, the best there was in American medicine. William Wood & Company, the owners, for nearly fifty years—practically since the present nominal head of the house, William H. S. Wood, in 1863, became a member of the firm—have conducted an exclusive medical book publishing business. The imprint of the firm has been on the title page of some of the best medical works this country has produced. This medical book and journal publishing business is presumed to have been and to be a paying one. The journal-publishing part, especially the *Record*, undoubtedly has been a source of a comfortable annual revenue.

The patronage of William Wood & Company, as medical publishers, came from the better class of physicians—those who read and think. Their journals have been of such a character as also to appeal to the intelligent in our profession. Under such circumstances, one would naturally suppose that they would have realized that the movements inaugurated by the American Medical Association against the nostrum evil, and for a better condition in the profession, would be endorsed by the thinking class of physicians—that is, by those to whom



William Wood & Company were indebted for their success in the past and on whom they must depend for their support, as medical book publishers, in the future; hence, that they would, for policy's sake at least, have supported the Association in its laudable efforts. But they have done just the opposite.

Through their periodical, the *Medical Record*, they—or their employe—have seen fit, in four editorials, to attack the American Medical Association, its officers and its present activities. Their criticisms—if these attacks may be so dignified—ramify into every phase of the Association, its management, and its work. Their object, it is quite evident, was to discredit the officers of the Association, to reflect on the Association itself and to create dissension among its members. The animus prompting them also is plain to those who know how the subscriptions to the *Record* have been falling off and also to those who have observed the mass of nostrums in its advertising pages. The House of Delegates, the Board of Trustees and all the officers of the American Medical Association welcome honest criticism and suggestions that are made for the purpose of bettering conditions, but they resent attacks made to disrupt and disorganize.

The editorials consist of insinuations and deliberate misstatements of facts and bear evidence of having been written by one who has little, if any, knowledge of the history of the Association, of the details of organization or of the work the Association is doing. These attacks should be ignored, but, appearing in a journal that in the past has been considered reliable, some of its readers have believed that there must have been some basis for the attacks, not realizing that the *Record* would stoop to malicious misrepresentations. Further, certain medical journals, for well-known reasons, have made all possible use of the matter. Knowing that their own outcries of "graft," "fraud" and "clique" were laughed at, they would now say, "You did not believe what *we* printed; now read what the *Medical Record* says."

It would be more satisfactory to quote *in extenso* from these editorials—for this would give our readers an idea of what they are, in which case no comment of ours would be necessary—but we have not the space. However, although the editorials were in the form of vague generalities, insinuations and innuendos, it evidently was the intention of the editor of the *Record* to have his readers accept the following propositions:

1. That the policy and the management of the American Medical Association is in the hands of a self-seeking "ring or clique."

This insinuation is constantly made by the editor of the *Record*. What evidence has he for such a statement? On what authority does he insinuate that the House of Delegates, composed of men elected from every state and territory in the Union and changing its membership every two years, is or can be dominated and controlled by a few men for their own purposes? Such a charge is absolutely false, is supported by no evidence whatever and is a direct insult to the representatives of the profes-

sion, who are chosen by their fellow physicians to administer and protect their interests. Never, in the history of the American Medical Association, was there assembled a more representative, fearless and independent body of men than that composing the House of Delegates at Boston.

2. That the "financial reports of the American Medical Association have been disquietingly analogous to those of insurance companies and have dealt in glittering generalities."

Had the solicitude of the editor of the *Record* regarding the affairs of the American Medical Association extended over a longer period than that of his own incumbency of his present exalted position, he would be aware that the reports of the Board of Trustees for the last few years have been far more complete and more detailed than at any other period of the Association's existence. We recommend to the editor of the *Record* a casual perusal of the Association's proceedings, not only for the current year, but for preceding years, before he attempts to misinform his readers.

3. That there is, in the minds of honest and intelligent members of the organized profession, a suspicion of "graft;" that the accounts of the Association have been "juggled;" that "more than 23 per cent. of what should have been received in dues and subscriptions remains unaccounted for."

This also is untrue, and, furthermore, it is an infamous libel on the members of the Board of Trustees, who have, without one cent of pay and at a sacrifice of their own time and professional work, looked after the business of the Association. The members of the board are men of high rank in the profession and of unblemished personal character. On what grounds does the editor of the *Record*, by covert insinuation and baseless innuendo, attempt to question their integrity? The standing of each of them is as much above suspicion as the editor of the *Record* could possibly wish his own to be. What evidence or proof has he to justify him in attacking honorable members of his own profession? As a gentleman and a member of a scientific brotherhood, it is incumbent on him either to retract his statements or to produce such evidence as will justify his malicious utterances.

4. That the House of Delegates at Boston was dissatisfied with the report of the Board of Trustees and that it was denied details regarding the business of the Association.

This statement every member of the House of Delegates knows to be false. The report of the Board of Trustees was adopted by unanimous vote. During the reading of the report, the complete payroll, showing every cent paid in salaries and wages to the 150 and more employes of the Association, from the Editor to the errand boy, was submitted to the House. Detailed statements, covering every item mentioned in the auditor's report, were submitted, or were ready for the information and inspection of the members of the House. We fear the *Record* was not very well served by its Boston representatives and we suggest that hereafter more reliable and accurate data be secured as the basis for

future attacks. Incidentally, we are constrained to ask by what right the *Medical Record*, or its owners, the commercial house of William Wood & Co., demand the publication of the pay-roll of the American Medical Association for the scrutiny and information of any and all commercial interests. Is such a list published by any fraternal organization, by any company or by any corporation anywhere?

5. That the surplus of the American Medical Association is nearly a quarter of a million dollars.

The editor of the *Record* has perpetrated the sophomoric error of confusing surplus with assets. The actual surplus, as shown by the auditor's report, published in *The Journal*, was \$60,084.21. The assets of the American Medical Association, as set forth in the same report, were, on January 1, 1906, \$247,482.91, but the editor of the *Record* failed to note, or was unable to grasp the fact, that this included real estate and buildings, furniture and machinery, stock and cash on hand, as well as bills and accounts receivable. We have the statement of the editor of the *Record* himself made some months ago, that "the editorial and the business departments of the *Record* are absolutely separate." If his conception regarding the surplus is to be taken as a sample of his financial ability, we can not but commend the foresight of William Wood & Co. in making such an arrangement.

6. That the Treasurer of the Association, to whom the editor of the *Record* sarcastically refers as a "prominent bank director and successful financier," is responsible for the investments of the surplus of the Association.

The most superficial acquaintance with the Constitution and By-Laws of the American Medical Association would have shown the editor of the *Record* that the Treasurer is simply the custodian under heavy bonds, of the surplus funds of the Association, which he holds subject to the order of the Board of Trustees. The Trustees themselves, and not the Treasurer, are responsible for the investment of the surplus funds of the Association.

7. That the Association has become so big "that the number of papers presented in the various sections is too great to permit of their being assimilated by the hearers, or profitably discussed."

If our self-appointed critic had been in touch with the section work, he would have known that there have been for the last four or five years fewer papers than ever before; that sixty, seventy or eighty papers in a section was not an uncommon thing in years gone by; that now, by a general law, the number is limited to forty and that some of the sections have fixed a still lower limit, some as low as twenty-five. As the editor of the *Record*, so far as we know, never attended a session of the Association, he is excusable for this misdirected criticism.

8. That there is no need of the proposed medical directory; that the proceeds of the directory will increase the income of the Association to half a million dollars, that the sales of the book to non-members and the profits of the advertising will pay the cost of production and that the publication of the

American Medical Directory is absolutely without excuse.

The consideration of the Directory demands a chapter by itself, which we propose soon to present to our readers. Suffice it to say at this point that the editor of the *Record* either has no conception of the objects of the Directory and what it will stand for, or else purposely ignores them. These matters have been fully discussed in *The Journal* time and again. In *The Journal*, Nov. 18, 1905, for instance, appeared a detailed statement of the plan and scope of the work, which evidently the editor of the *Medical Record* has never read. His profound suggestion that the Association give away twenty thousand—now it would be twenty-six thousand—copies of the Directory to its members is too puerile for comment. We once more pause to congratulate William Wood & Co. that their editor has no connection whatever with the business department of the *Record*.

9. That there is "loudly expressed dissatisfaction with the present management all over the country, which is assuming definite form in the organizing of new state medical societies and even serious talk of a rival national organization."

Will the editor of the *Record* kindly name any state in which a new state medical society is being organized? The Association office is presumed to know the actual conditions regarding medical organization throughout the country. But, evidently, this presumption is unfounded. The *Record* has discovered a condition that was not known to exist. Now, what are the facts? Never before was there less opposition to the plan of organization than now prevails in every state and territory, all but two being organized on a uniform basis. Until two years ago, there was opposition in several states; now there is practically none. In Georgia, immediately after the reorganization of the State Association, there was some disaffection on the part of a few physicians and some transient agitation for the organizing of another state society, but this amounted to nothing. In one county in Michigan, six dissatisfied physicians agitated the organization of a new state body, but nothing definite resulted. This movement was never looked on seriously by those connected with the state society. The disaffection in both instances was the result of purely local conditions in no way related to the American Medical Association and was merely a remnant of the disaffection that at one time prevailed in many states. Never has the profession been more united, never before has it been so influential, never have there been so few local jealousies, and never has there been a more hopeful outlook in every way than now.

10. That the Walker resolution, introduced at the Boston session, was defeated through the efforts of the officers of the Board of Trustees or their friends, and that an attempt was made to suppress an investigation of the business affairs of the Association.

Again, we are led to deplore the inaccuracy of the reports received by the *Record*. The facts are these:

The moment the reading of the resolution was concluded, it was at once tabled by the practically unanimous vote of the House. There was no discussion. The members of the House cared for none. There was no time for the officers to express themselves even had they desired to do so. The statement that the resolution was opposed by the officers, the trustees or their friends is an absolute falsehood, unless the entire membership of the House of Delegates is included under the designation "friends." The Association and its officers are fighting secrecy and deception and are not practicing it.

11. That at Boston "a strenuous effort was made to get rid of the Editor, and that so great has become the dissatisfaction with his administration that this endeavor might have been successful had the general body any voice in the management of the Association."

This statement is unqualifiedly false, as all who attended the Boston session well know. There was an opposition, it is true, and a bitter one, but it was limited to the horde of nostrum vendors who have been getting rich by humbugging and deceiving our profession, and to the owners or attaches of those medical journals nourished by the same brood, who allow themselves to be used as the mouthpieces and tools of proprietary interests. The Editor of *The Journal of the American Medical Association* knows full well that he is hated with a most intense hatred by these gentlemen and their allies, and that they would stop at nothing to secure his "dismissal," but he also knows, and knows thoroughly and well, that the "management" was fully and completely endorsed by 95 per cent. of the physicians at the Boston session, and, for that matter, is endorsed by a like proportion of the physicians of the country, who know the truth of what is going on.

So much for the "facts" regarding the American Medical Association as set forth by the editor of the *Record*. Just a word as to that gentleman himself. He graduated in the spring of 1877 and so has been a member of the medical profession for 29 years. During all this time, his interest in the American Medical Association and in medical organization was so great and his enthusiasm so uncontrollable that in March, 1906, just ten weeks before the Boston session, he became a member of the American Medical Association. Truly, not without reason has the zeal of the new convert become proverbial. Had he devoted a small part of the 29 years of his professional life to a more careful study of the organization of which he was, at last, to become a member, he might have been able to discuss the Association's affairs intelligently, if not truthfully. During all this time, men whose membership in the organization numbers years while his numbers weeks were earnestly and unselfishly striving, not only to build up the American Medical Association, but to bring about better conditions in our profession. During the same time, what has the editor of the *Medical Record* done in this respect? Yet he now arrogates to himself the right to criticize and, by

implication and by baseless insinuations to brand these same men as "boodlers" and "grafters."

Is it probable that the business interests of an old and hitherto reputable publishing house will be enhanced by the use of its journal as a medium for such malicious, unfounded and unwarranted attacks? We think not. However, we commend this thought to the consideration of William Wood & Co. of New York.

#### THE 74TH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, HELD AT TORONTO, AUGUST 24TH, 1906.

(Reported for the JOURNAL by Dr. Langley Porter.)

It has been a great pleasure to see American and British physicians fraternizing at this, the 74th Annual Meeting of the British Medical Association, which has been, in effect, a gathering of medical men from the English-speaking world. Certainly there were as many visitors from the United States as from Great Britain, and in the sections many papers were read by Americans, and there were but few discussions that did not bring some authority from the United States to his feet.

The section that attracted by far the most attention was the medical, with its international symposium on heart block;—Barr, Gibson, Broadbent, Mackenzie, Erlanger, and Aschoff, each had a paper, and all were listened to with the utmost attention.

Aschoff, Professor of Anatomy at Marbourg, created a profound impression by his exhaustive detailed paper and impressive array of specimens, illustrating the monumental and revolutionizing work done by himself and Tawara on the anatomy of the conducting fibres of the heart. He demonstrated, apparently to the satisfaction of all the authorities present, that the conducting apparatus of the heart is inherent in an array of fibres partially described half a century ago by Purinje, which fibres consist of a tissue intermediate between the muscle and nerve, very rich in sarcoplasm. According to Aschoff the system begins at the roots of the great veins, spreads sub-endocardially over the auricle, is gathered together at the auriculo-ventricular septum, into what Aschoff calls "the knot", which corresponds to the bundle of His, and from this again spreads out, dividing and re-dividing sub-endocardially over the ventricle, the final divisions merging with the true muscle plasm. The distinctive features of these fibres, according to Aschoff, are their richness in sarcoplasm, the length and narrowness of the individual cells, and the presence about them of a true sheath of connective tissue. It is the belief of the German anatomist that interference with any part of this conducting apparatus may cause arrhythmia of one or another type; perhaps complete heart block. He claims to have seen two cases of typical heart block, in which the His bundle was unimpaired, although he did not make it clear whether or not any part of his conducting system was injured in these cases. He showed slides and photographs from the case reported by Ophuls and



Schmoll of San Francisco, and quoted extensively from Schmoll's paper on heart block in the course of his talk. Aschoff also showed, as a unique specimen, the heart of a patient who had suffered from acute rheumatism, in which there was a nodule that had destroyed the continuity of the Purkinje fibres, and he claimed such a specimen could occur in no other disease, his idea being that the endocarditis of rheumatism was not accompanied, as usually thought, by myocarditis, but that the danger to the myocardium was secondary to interference by these specific nodules with the conducting apparatus, such nodules he conceives as being practically the same as those so often seen sub-cutaneously in cases of acute rheumatism.

There was some skepticism manifest, and the just criticism was made that there was more interpretation than demonstration in this particular case.

Mackenzie, of Burnley, was received with great applause, and spent a large part of the time allotted to him in complimenting Aschoff on achieving a piece of work that could explain so many hitherto inexplicable points in the production of arrhythmia and heart block.

Mackenzie gave a short but very clear exegesis on the progress of the Adams-Stokes syndrome, and showed tracings with clinical notes and explanations which made this complicated subject quite clear to his audience. He also demonstrated the newest developments of his famous polygraph,—an ink-writing machine that will trace the radial and venous pulse and give the tracings of any desired length. The apparatus is exceedingly simple, but, unfortunately, the instrumental defects are so great that the contour of the tracings has no value. However, it will give as perfect relative time results as possible, and it is obvious that we will be able to get many new facts from an apparatus that can produce for us time relations between auricle and ventricle through a period of from ten to fifteen minutes. Especially will it be useful in those cases of occasional arrhythmia that are so puzzling to us.

George Gibson, of Edinburgh, followed Mackenzie, and showed that in heart block it is possible to record the independence of auricle and ventricle by use of the capillary electrometer, and also that such independence may be demonstrated by the Roetgen Rays on the fluorescent screen. Gibson had a series of beautiful microscopic sections of the His bundle, from normal hearts and from hearts of patients exhibiting heart block, and he was the one man of authority who seemed to think that Aschoff's interpretations of his findings were, perhaps, over enthusiastic.

Erlanger's paper was a re-statement of the facts published last year, embodying the physiological experiments that have now become classic and familiar throughout the United States. Erlanger had some friendly controversy with Mackenzie as to the source of the stimulus to the auricle, maintaining that it was probably entirely due to the entrance of the blood. I believe he has gone to Madison, with the determination to investigate this point more fully, and that very soon we may expect to

have more exact knowledge than we have hitherto had about the initiation of stimuli.

While the section of medicine was the one that attracted, perhaps, the largest audience, the greatest individual impression was made by Sir Victor Horsley, who delivered the address in surgery. Naturally, Horsley was given a subject in the domain of the nervous system, and the title of his paper was "On the Technique of Operations in the Central Nervous System." He occupied some hour and a half, during every minute of which he demonstrated his mastery of the subject. The mover of a vote of thanks very justly stated that, Horsley had not quoted from literature, because he had made the literature on this subject, and that the paper just presented was a contribution that epitomized all his past efforts and presented many new facts.

The points of most interest that were brought out related to the prevention of shock in brain operations. Horsley attributed the causes of shock, first, to anesthetic, second, to the cooling of the patient's body, third, to the cooling of the brain tissue, and fourth, to pressure on the bulb, due to faulty manipulation and position, and he was exceedingly insistent on the matter of anesthetic, going into the subject in great detail.

He stated that years ago, because of the remarkable power morphine had of contracting cerebral vessels, he used a combined anesthetic of morphine and chloroform. Because of adverse effects on the alimentary canal and on the respiratory centre, he gave up the use of morphine and has since employed pure chloroform. He had not used the intraspinal injection of cocaine or stovaine in operations. Reflecting on the reports, especially from Morton, of San Francisco, he had decided to give that method in the future a thorough trial. Ethel he condemned as inadmissible, although he specially stated that he did not desire to be considered as criticizing his colleagues, especially American surgeons, who had accomplished most brilliant results under ether narcosis. His objections to ether were that it causes a rise of blood pressure with a notable increase in blood viscosity, and, therefore, increased hemorrhage. These disadvantages he thought outweighed its lower physiological toxicity on nerve tissue.

Chloroform, on the other hand, had been shown to cause a fall of blood pressure with the viscosity of blood diminished, although not entirely absent. So, it does not aggravate bleeding, nor embarrass respiration, and is followed by no after-excitement and but moderate headache. To the mind of the lecturer it seemed probable that sickness after chloroform can be entirely done away with, as it probably depends on the dosage.

He referred at length to the report of the British quantitative determination of the amount of chloroform, which was given the task of making a precise quantitative determination of the amount of chloroform necessary to produce anesthesia. The committee reported that less than two percent of chloroform vapour in the atmosphere, breathed by the patient, was enough to produce deep narcosis, and that a very much smaller dose is required to maintain

unconsciousness. Since that report Horsley has used entirely the Vernon-Harcourt inhaler, and he showed a photograph of his amphitheatre with the apparatus in use. It seems rather cumbersome, but if his claims are justified, which they undoubtedly are, this clumsiness is more than compensated for by the increased safety.

The inhaler is arranged to give from one-half to two percent volume of chloroform. Many anesthetists have reported adversely on the instrument, Horsley believes, because it has been improperly used. He lays great stress on the absolute necessity of making the face piece fit tightly by the use of antiseptic towels. He also gave us a diagram, which diagram illustrated graphically the pain undergone by the patient during the operation. Skin incision gave the highest point in the curve, which dropped rapidly during the operation on bone, with a slight raise of the pain curve, due to the fifth cranial nerve supply, when the dura was opened, then it very rapidly fell to almost nil during the exploration and treatment of the brain. There was another sharp raise when the skin was sutured, followed by a rapid fall when the dressings were placed. His point was that in giving the chloroform, the curve of chloroform vapor concentration should run parallel with the curve of the pain production, and in the practice of his anesthetists, Doctors Buxton and Powell, it is customary to begin with one-half percent vapor, which is rapidly run up to two percent. This is maintained for about five minutes, before the incision of the skin and reflection of the flap is accomplished. The dose is then lowered and the bone removed at about one percent concentration. Before the dura is opened concentration is increased to somewhere about one and one-half percent. Afterwards the encephalon can be dealt with without causing any pain unless some of the peripheral sensory cranial nerves be accidentally irritated. Consequently less than a half percent of the chloroform in the air is needed here. Often it can be entirely shut off. Horsley reports that he has been able to do this for twenty minutes in a child, never more than fifteen minutes in an adult. Before the return of the reflexes, of course, renewed concentration of chloroform is administered. After the brain lesion is dealt with the percentage is raised about one percent during the insertion of sutures. Finally this percentage is continued to the commencement of the dressing in order to prevent vomiting occurring before the protective dressing is applied.

In the matter of maintenance of body temperature, Horsley insists that the temperature of the room should not be less than 75° F., and that the operating table should be provided with suitable heating appliances, either of hot water or electrothermic.

In order to maintain the physiological energy of the nervous system and to prevent radiation from the brain, he uses continuous irrigation with a solution of sublimate of 1 in 10,000 strength, which solutions he puts into the irrigator at a temperature of 115°.

On the question of hemorrhage, which is very annoying during operation, he urged the advantage

of using irrigations. He quotes Milne Murray, who from his experiments concluded that water from 70° to 105° F. will invariably dilate blood vessels and promote the flow from open ones, but that water of a temperature from 110° to 120° will have just the opposite effect. Therefore, his irrigation at 115° answers a double purpose, preventing hemorrhage as well as radiation. He says it is very essential that a large irrigator should be used, in order that the fluid should remain at 115° and not fall below 105°.

He very strongly objected to the tying of the carotid in order to control the blood supply, and thought it did great damage. All bleeding from the veins and sinuses in bones, he held, was trivial, because it could be immediately arrested by plugging with wax if the periosteum around the hole were completely removed; no difficulty should ever arise from hemorrhage from this cause. Bleeding from sinuses and other veins and from large vessels in general can be controlled by pressure with the point of an instrument, while the opening is closed by a fine suture.

He also alluded to the inhalation of oxygen as a manoeuvre by which venous oozing could be rapidly controlled, and one of the advantages of the Harcourt inhaler is that at any time during the proceeding, without any special preparation, oxygen may be passed into the inhaler.

His remarks on shock contained little except what is common knowledge.

As to the methods of operation Sir Victor Horsley thought that much of the shock depended on the manner in which the skull was opened. The principles that he laid down were, first, that the bone should be divided with as little vertically applied force as possible and removed with the least possible pressure on the brain and dura. He finds that these essentials may best be fulfilled by first removing a trephine disc, and marking with a large saw the area to be removed, and finally cutting away the bone with a large bone forceps, all traction being directed outwards. He was particularly scornful of those operators who use mallet and chisel.

He also laid down as an axiom that if a line be drawn from the frontal eminence to the occipital protuberance, shock results more often from operations below than above that line. He also stated that the risk of an operation for decompression is greater if the opening is not made directly over the lesion. He laid stress on the point that operation gave a greater risk when the diagnosis had not been made, or had been incorrectly made. In cases incorrectly diagnosed, 37% of patients had died from shock, and in those cases in which the diagnosis had been correct, only 7%.

He was very urgent in his recommendation of the injection of strychnine combined with oxygen inhalations in the treatment of the respiratory phases of shock. He thinks as a stimulant to the bulbo-spinal centres, strychnine is unrivalled, but it seemed to him inadvisable to give the drug before some alteration in the rhythm of the respiratory centres showed itself, and very unscientific to give it either immediately previous or at the end of an operation,

with the idea of anticipating shock. He also called attention to the fact that we are often led into fear of shock by the normal depression of the cardiac and respiratory functions that precedes chloroform vomiting. He admits, as far as circulation is concerned, the benefit of bandaging the limbs over cotton-wool, and of repeated nutritive enemata. In very acute conditions a small dose of atropine is useful, and in cases of peripheral vasomotor paralysis a small dose of digitalis. Alcohol he considers as useless—in fact, harmful; strong coffee, useful; but cardiac stimulation generally a clinical error under the circumstances.

The lecturer spent some little time in discussing the displacement of the brain in the operation. He was thoroughly convinced that Frazier's recommendation to remove the lateral hemispheres of the cerebellum is not only useless but definitely damaging. He thinks that the manner of displacing the brain to reach the tumor is a matter of great importance. He advises pressure directly upwards on the vault, but this compression must be gradual and cautious and produced by the insertion of a flat spatula beneath the hemispheres. Under these circumstances the soft nerve tissues mould themselves readily, but too much and too rapid pressure will produce laceration of brain tissue and oozing between the fibres of the corona. Such compressions at the base are relatively unimportant. With this procedure properly applied to the temporal lobe, one can see and readily examine, with good illumination, the crura cerebri, the circle of Willis, the pituitary body and internal carotid, even the second and third nerves come into view, and he has, after the removal of a pituitary tumor, been able, by the use of a small rhinoscopic mirror to further examine the base of the brain. With a copper spatula of suitable size, gentle pressure and a strong headlight, the lateral region of the cerebellum and medulla oblongata with the issuing nerves, may be brought into view, and as he has demonstrated these facts, the lecturer is especially chary of following the procedure of removal advised by Frazier.

Reference was made to the superstition that interference with the ventricular cavity is necessarily fatal.

One important conclusion of the lecturer was that in no case in which there had been signs of intracranial pressure, especially if there was increasing optic atrophy, had the medical man a right to temporize. Six to eight weeks of medical treatment, which practically means treatment with iodides only, was the limit to be allowed. Incision into the dura, no matter if the tumor was inoperable, would in most instances mean the retention of sight by the patient for the period of remaining life, and in many more cases than medical men in general believe, the tumor would be removable and the condition amenable to surgical interference.

Dr. Adami's paper on the relation of fluid crystals to arterio-sclerosis and other pathological conditions is one that will probably create a great deal of attention when published.

So much was programmed that the attempt to follow the work was something like following the per-

formance in a three ringed circus. For instance, while heart block was being discussed in the section of medicine, a very interesting discussion, in which Professor Clifford Allbutt was the most notable speaker, was being carried on by the section of pathology, which was largely given over to a discussion of Professor Hewlett's and Dr. De Korte's papers on a beri-beri-like disease in monkeys, and gave a very full pathological discussion of the subject. Dr. Hamilton Wright was also present, and gave his well-known views.

The joint discussion by the sections of medicine and pathology on nutrition brought a statement from Dr. Chittenden of his experimental work on the nitrogen minimum. Professor Haliburton was inclined to doubt the utility of the work of Chittenden, laying great stress on the fact that nitrogen minimum was not necessarily the nitrogen optimum, and he further laid stress on the fact that while Chittenden's experiments had been extensive, that more extensive experiments were being performed daily on the poor in great cities of the world and on vegetarian nations who lived on a nitrogen standard, such as Dr. Chittenden suggested for us, and they were inevitably people below the standard in physical power. Robert Hutchinson gave an exceedingly interesting philosophical discussion of the whole subject, also insisting that the nitrogen optimum was not necessarily the nitrogen minimum. He asked us to consider that man could and did get along with the use of one lung, but that any one would probably claim that one lung was not physically optimum. His suggestion was it would be exceedingly interesting to follow carefully in the future the incidents of disease and their resistance by the people, who accepted Chittenden's standard. He criticised Dr. Chittenden's method of demonstrating blood resistance, Chittenden having laid stress on the hemoglobin contained; whereas to the mind of Hutchinson the only method we had which gave us any idea of the resisting power of the body fluids to disease was the determination of the opsonic index.

As a matter of fact, in all the learned discussions practically nothing new was brought up, and Chittenden's position remains unshaken. Hutchinson made one good point, that we should be much more intent on determining, not the nitrogen or the carbohydrate, or the fat minimum or maximum or optimum, but the food optimum; that undoubtedly the proteid values of both fats and carbohydrate were insufficiently recognized and insufficiently used in the formation of normal and sick dieteries.

The writer was, naturally, most interested in the section of pediatrics. Unfortunately the interest caused by the presence of Aschoff, Erlanger and Mackenzie in the medical section prevented the attendance at all the meetings of this section. There were, however, very excellent papers by Morse, of Boston, and La Fetra, of New York, on the treatment of summer diarrheas of children, which in the minds of the speakers, seemed to be largely matters of diet. Shaw, of Montreal, gave a very exhaustive and interesting account of the fat digestion and absorption in children, bring out no particularly new



facts, but reviewing old facts in a way that will certainly be of value to those of us who have to feed children whose stomachs seem unable to digest normal percentages and usual mixtures of fat. The most interesting discussion in this section followed the papers of Cautley and Stiles, who discussed the condition of congenital pyloric stenosis. Specimens were exhibited which could leave no doubt in the mind of any one that the condition is truly congenital, and not, as some claim, post natal and due to attempts of a dilated stomach to empty itself. Ashby showed us a specimen from a child thirty-five days old, in which the pylorus was hypertrophied to at least half an inch in radius. The stomach itself was dilated and would hold probably about eight ounces. Other specimens were shown illustrating the same point.

Cautley dwelt upon the medical treatment and on diagnosis. His conclusion was that if one waited for the production of a dilated stomach which should show peristaltic waves and a tumour sufficiently large to be easily palpated, the general condition of the child would be such that operation would give it no aid. Stress was laid upon the scantiness of the stools, although this was by no means a necessary clinical point, for the case which Ashby showed allowed enough food to enter the intestine to provide a fairly bulky stool, but still that point, together with continuous vomiting must be one that leads up to operative interference. Such conditions are exceedingly rare. In twelve years he had seen fourteen cases, and he undoubtedly has an opportunity few men have to see cases of such a type. The great difficulties in diagnosis may be well imagined. For diagnosis Cautley divided the cases into three classes: (1) True productive congenital hypertrophy; (2) Slight congenital hypertrophy with post natal spasm and dilatation; (3) Pseudo hypertrophy due to spasm. Hutchinson created somewhat of a sensation by stating that in the last two years he had seen ten such cases, of which none had died, and he had initiated surgical interference in none of them, which results were quite opposed to general experience. Cautley went so far as to state that if Hutchinson had seen ten cases in two years, and they had recovered without operation, none of them were true congenital stenosis of the pylorus, that they were merely cases of spasm secondary to acute indigestion, Cautley's third class. In the discussion one fact was not brought out that seems to me of great importance, that is, the readiness with which certain fats, high in caprillic and caproic acids, can produce and do produce, spasm and a condition of pseudo stenosis, with dilation and vomiting, which is very difficult to diagnose, but which responds readily to the use of alkalies, lavage and minute doses of opium.

Stile's paper treated entirely of the surgical aspect, and his results were certainly not such as would encourage us to proceed to operation unless our case was one in which there was absolutely no question of true congenital hypertrophy, and in which the diagnosis was made fairly early. Forty-eight per cent of his operative patients died, and he probably has the average experience. He divided

the procedure into divulsion and gastroenterostomy and pyloroplasty. He advised the latter operation, the v-y operation, as he called it, appealed more to surgeons than it does to me. He advised against the use of the gastroenterostomy, and divulsion had produced no good results in his hands. He strongly opposed the dilating of the pylorus as being thoroughly unscientific and dangerous, stating that unless the pylorus was ruptured no good could come from it and it was much better to cut than to rupture, avoiding all danger of infection in the peritoneum.

The section of therapeutics, under the Presidency of Donald MacAlister, Cambridge, was in joint session with the section of medicine for one day. Most of the programme was given up to the value of alcohol in treatment, the opinions being diametrically opposed, but the final conclusion seemed to be that while alcohol was of use, especially in those case in which the principal vessels were contracted, it was of little value in any other way, but great stress was laid upon the difference between alcohol pure, dilute, and alcohol in combination with the higher ethers, as in the better class of wines, most of the speakers laying stress on the fact that wines, such as sherry, and champagne, were of great value, when diluted alcohol was practically useless.

The meeting closed on Friday, and on Saturday the members were dispersed throughout the country, for a series of excursions and fetes.

#### SPASMODIC TORTICOLLIS.\*

By P. C. H. PAHL, B. S., M. D., Los Angeles.

Synonyms—Caput obstipum spasmodicum; torticollis fonctionnel; tic rotatoire; torticollis mental; spasmodic wry-neck; torticollis spasmodicus; tic giratoire.

Introduction. About three years ago, I was called in consultation upon a case of spasmodic torticollis. It was the first case that ever came under my observation, and my having examined, up to that time, not less than two thousand orthopedic cases of all kinds, goes to show that the condition is a comparatively rare one.

I began looking up the subject in the literature at my disposal, and I was very much disappointed at the meagre information to be obtained.

I went ahead with my case, however, and did the best I could, determining that I would look up this matter exhaustively and bring all the facts obtainable together into one paper, which I would present to the Western profession, hoping that it might serve as a help in recognizing the condition and in choosing the method of treatment most applicable.

This article contains the report of cases and other information of value to be found in the papers of fifteen American, ten English, nine French, five German and two Italian authors. The different methods of treatment and the results of these are given in full, as well as three of my own cases and

\*To have been read at the Thirty-sixth annual meeting of the State Society, San Francisco, April, 1906.

the operation which I have successfully performed.

These reports were abstracted for me from the *Index Medicus*, by Dr. Albert Allemann, of the United States Army Medical Museum, Washington, D. C.

**Definition.** Spasmodic torticollis is a spasmodic movement of the various muscles of the neck, chiefly the rotators. The principal element is a clonic spasm; all else is excluded. The spasm is aggravated when any voluntary muscular effort is attempted, but disappears during sleep, while lying down with the head resting firmly on a pillow, while sitting with the head firmly supported against the back of a chair, and, usually, while standing with the head supported against some firm object, such as a wall or post. Walking, to any extent, is impossible without supporting some point about the face or head, with the hand or some object held by it.

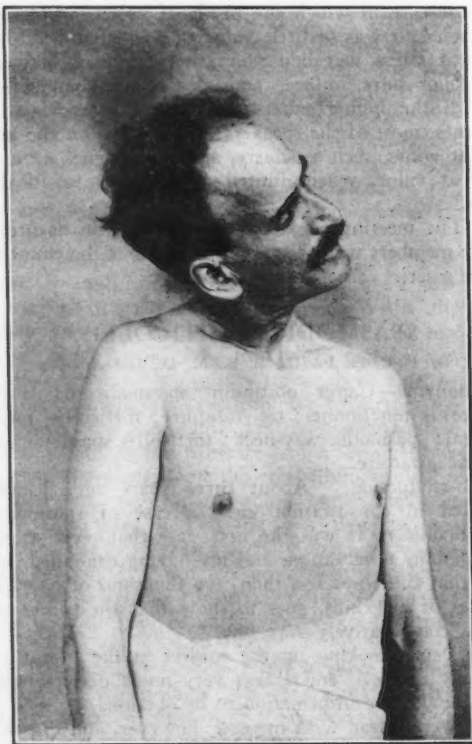


Figure 1.

**Clinical Picture.** The head is drawn sideways, obliquely, downward at once or in single jerks and rotated to such a degree that the ear approaches the shoulder and the chin is directed upward in the opposite direction; the sterno-cleido mastoid muscle, of the side toward which the head is drawn, is bulging out and often hypertrophied. In those cases, where the head is drawn backward and the shoulder upward, the trapezius can be felt in a state of rigid contraction—there may be pain in the body or the origin or insertion of the muscles affected.\*1. Walking being impossible without support at some point about the face or head, it is in-

teresting to note the different means which have been resorted to in order to disguise, to the public, this affliction; the placing of a lead pencil, an umbrella handle or cane against the point of the chin are methods frequently employed. One patient completely deceived me as to the real nature of his malady by wearing a pair of dark glasses—this naturally led me to think that he had some eye affliction. In walking, or while making any voluntary muscular effort, he would grasp one of the lenses with the apparent intention of adjusting the glasses, and this would give him sufficient support to get along after a fashion.

**History.** The ancient physicians, Hypocrates and Galen, do not mention this malady. Charles Bell, in 1830, mentions several cases; in 1837, Arnheim describes a case clearly and says that he had never read about such a disease. In 1838, Strohmeyer treated this condition surgically by dividing the sterno-cleido mastoid muscle. \*1.

Bujalski first divided the spinal accessory nerve in 1835; myotomy was performed by Guerin in 1840. Both of these men were forgotten, and, in 1862, Campbell de Morgan, knowing nothing of Bujalski, proposed the division of the spinal accessory nerve and this operation is usually attributed to him. Since that time, the division and re-section of the spinal accessory nerve has been done by a large number of surgeons in England and America.\*27 The French also frequently operate for it, but quite a number attempt to treat this condition by suggestion and re-education, which they term the pedagogic treatment.

**Etiology.** Spasmodic wry-neck depends upon abnormal nerve action; the causes are, as a rule, obscure. A neurotic family history, grief, anger, mental overwork, astigmatism, muscular insufficiency, trauma, infectious disease, and degeneracy are frequently mentioned in the case reports. C. K. Mills says that the condition is very frequently due to differently situated irritating lesions.

1. A lesion in the spinal cord, anywhere above the fifth or sixth cervical segment.
2. An intra-spinal but extra-medullary lesion of membranes, bones or nerves in the upper portion of the vertebral canal.
3. A lesion of the medulla oblongata or floor of the fourth ventricle.
4. A lesion of the main trunk of the spinal accessory nerve as it passes downward in the sterno-cleido mastoid and trapezius muscles.
5. A lesion of any of the nerves which anastomose with the spinal accessory and are closely connected with it in the spinal cord.
6. A lesion of the cortical centers which preside over lateral deviation of the head.\*7

**Pathology.** The pathology of spasmodic torticollis is still under controversy. It is at once obvious that the chief consideration is the spasm, but the movements of the head are complicated, and when the head is jerked into the true torticollis position, it involves a large number of muscles whose enervation is varied and complex. We are compelled to give some consideration to the view of Brissaud; it cannot be denied that a strong psychic element exists.

Many authors believe that it is a disorder of the cortical centers for rotation of the head; others that long continued habit, brought about by occupation or eye strain, may finally merge into spasm.

**Statistics.** In sixty-eight cases that I collected from the literature, I found that men and women were equally affected; it occurred most frequently between the ages of 20 and 30, and that the right side was affected twice as often as the left. Out of sixty-eight cases, twenty-five were females, twenty-four were males; and, in nineteen cases, the sex was not given. Between the ages of 10 and 20, there were three cases; between 20 and 30, nineteen cases; between 30 and 40, eight cases; between 40 and 50, thirteen cases; and between 50 and 60, five cases. By various treatments employed, twenty-eight recovered, seventeen were improved and eleven unimproved. In twelve cases, the treatment was not given.

The methods of treatment employed and their results were classified under the following headings:

**Treatment.** I divided the different treatments described in the sixty-eight cases into nine groups.

	Number of Cases	Improved	Un- Improved	Recovered
Group 1. Hydrotherapy, Massage, Gymnastics, Electricity	1		1	
Group 2. Pedagogical	9	6	1	2
Group 3. Drugs and Medicines Administered Internally and Externally and Counter Irritants	6	1	4	1
Group 4. Mechanical	3		1	2
Group 5. Ligation of Spinal Accessory Nerve with silver wire	2		1	1
Group 6. Division of Cervical Muscles	14	4	3	7
Group 7. Stretching of Spinal Accessory Nerve	1			1
Group 8. Division of Spinal Accessory Nerve	13	5		8
Group 9. Division of Spinal Accessory Nerve and Posterior branches of the Upper three Cervical Roots	7	1		6

Group 1.—Hydrotherapy, Massage, Gymnastics and Electricity. There was one case treated by this method only; result, unimproved. With the exception of recent cases, I am convinced that these methods are of little value; there is nothing peculiar about their administration in these cases and, therefore, further details are deemed unnecessary.

Group 2.—Pedagogical. Under this group, there are nine cases; results, six improved, one unimproved, two recovered.

According to Brissaud, what we call psychotherapy is nothing else than certain words destined to show the patient where his will sins, and to exercise that which he still possesses, in a favorable sense. In these special cases, the trouble is confined to a fault of the inhibiting will capable of restraining a cortical caprice.

These words have nothing metaphorical and the method has nothing mysterious; it requires no especial power outside of mild firmness and encouragement, the first virtues of an educator. The physician, indeed, becomes an educator without borrowing anything from the more or less occult hypnotic suggestion. The patient must be immediately told that this co-operation is indispensable; he must voluntarily cause to act at the right moment the antagonistic muscles against those under spasm. It is, therefore, his own will that acts, not the personal will of the educator. I do not say that success will always follow; generally speaking, these spasms are the more difficult to cure the longer they have lasted and the older the patient.\*<sup>37</sup>

E. Feindel, an associate of Dr. Brissaud, describes the treatment of a case in 1897, in the following manner:

The first step consisted in showing the patient that not only her hand had the power to arrest the movement, but that any other support would do the same. The patient is seated before an apparatus, which is called a campimeter; this consists of an instrument mounted upon a stand with a chin piece and a circular face divided into various degrees. A hand, which can be operated at will by the operator, is followed by the eyes of the patient; the patient is advised to take similar exercises at home in the afternoon. The seances take place every day at the same hour in the forenoon, last a few minutes and are discontinued as soon as there are signs of fatigue.

The treatment consists of very simple exercises; that is, exercises of immobility and exercises of movement. The exercises of immobility of the head are graduated thus: In the beginning, the patient is sitting with the head supported on an object other than the hand; later, the patient, still sitting, is leaning against a support only; later, he stands up and still later, he walks. In these various positions he strives to hold the head straight as long as possible, but, at the slightest sign of fatigue, the effort of his will must cease; it is well for the patient to fix his eyes upon some object, and here the campimeter is used. The exercises of movement are also little complicated at the beginning; the head is turned to the right and to the left; it is inclined on one shoulder, then on the other, and this in various attitudes of the body, the shoulders being drawn up, the arms raised or crossed. We modify the treatment in many ways or augment the difficulties with the improvements, but the simple movements of the beginning are repeated at each seance and each badly executed movement is repeated in the succeeding seance until it is perfect. The movements must be made slowly, softly and without jerks, and stop at the least sign of fatigue; the duration of the seance is variable. At the beginning, from two to four or six minutes, according as the patient gets fatigued more or less rapidly. In the same seance, the exercises of immobility are mixed with exercises of movement; there are from four to six seances every day and always at the same hours. At least one of these must be directed by the physician personally. A seance of gym-



nastics may be followed by from two to five minutes of electrization with a feeble current and from two to five minutes of massage.

The patient must not be left to himself until a marked improvement has taken place; by that time, he will understand that this simple method of treatment is the only true one. The patient should continue the exercises for several months after cured.

Group 3.—Drugs administered internally and externally, and counter irritants. Under this group we place six cases, with the following results: One improved, four unimproved and one recovered.

Noble Smith says that neither drugs, local applications nor other general methods are of any permanent use in the treatment of well-established spasmodic wry-neck.\*<sup>18</sup>

T. H. Meyers states that because of the lack of exact knowledge of this condition, empirical measures are justified and, therefore, I wish to call attention to conium and atropin; I gave conium in steadily increasing doses. Beginning September 10, 1892, with five drops three times a day, each day the amount was increased two drops; when vision was affected, decreased dose and again increased. On November 5th, she took eighty drops; on the 23rd, one hundred and forty drops; legs were very weak, intensity of muscular spasm diminished a little. Aqueous solution of sulphate of atropin was injected into the painful points of the muscle once a day. On November 25th, four drops of a solution one grain to the ounce, was injected; on the 28th, six drops; the spasm diminished immediately after the injection. There was some nausea and vomiting; the patient became despondent; the spasm disappeared, for several hours only, after the injection; patient refused to continue treatment.

In another case, I gave conium in conjunction with a spinal assistance brace; improvement followed after a month's treatment. After a year's treatment, the patient took one hundred and eighty drops of conium daily and was greatly improved, but the spasms did not entirely disappear.\*<sup>17</sup>

F. de Quervain mentions that every kind of anti-spasmodic has been tried; zinc bromides, valeriana, belladonna, hemlock, morphine and chloral with very indifferent results.\*<sup>27</sup>

C. S. Potts believes that, before resorting to surgical interference, medical means should first be exhausted. We ought to try absolute rest in bed with the head low, massage, passive movements, actual cautery as a counter-irritant, electricity, full doses of either gelsemium, conium, hyocine, bromides, iodides or atropin. The latter is better administered hypodermatically into the affected muscles.\*<sup>28</sup>

I have personally tried salicylate of soda, apomorphia, lobelia and other drugs previously mentioned, without any lasting benefit.

Group 4.—Mechanical. There were three cases treated by this method. Result: One improved, two recovered.

H. J. Hall invented a clamp, which is very simple in its construction. It is made of light spring steel broader than, but in many ways similar to, the ordinary trousers guard worn by bicyclists. It has a tail piece running from the middle of the spring about six inches down the back. When the clothing is buttoned tightly over it, this tail piece helps to keep the spring closely applied. A gentle pressure is thus exerted on the side and back of the neck, as far forward as the anterior border of the sterno-cleido mastoid muscles. The best results are obtained when the spring is worn at about the level of the angle of the jaw. In several cases in which it was used, the apparatus instantly stopped most of the twitching, although the symptoms would at once recur upon removal of the pressure. This apparatus, when carefully made, can be worn with very little discomfort and is less noticeable than any other apparatus proposed.\*<sup>12</sup>

G. R. Elliott describes an apparatus, which is worth consideration in this paper. The apparatus usually applied in these cases is of the rigid type; patient gets tired and discards it. My apparatus affords necessary support without absolutely restricting any normal movement of the head. The apparatus made by Tiemann has a hard rubber chin piece and two uprights holding the back and sides of the head—the chin piece can easily be removed—these are secured to an upright over which is placed a coil spring in such a way that the force of the spring can be directed to a greater or less degree against the spasm. If the spasm is very violent, the spring naturally gives and allows the head to take the extreme torticollis position; when the violent spasm has passed, it again forces the head into the normal position. The spring can be adjusted so that it cannot force the head beyond the median line, and thus does not exert any force when the head is held in normal position.\*<sup>32</sup>

I have personally used a brace with a spring clamp similar to the one described by Dr. Hall, but the clamps were adjusted so that their padded ends would go over the angles of the jaw. A perpendicular support, extending from a cross piece with straps to be adjusted about the chest, running up the back of the neck to the head high enough to adjust a curved cross piece with straps to pass around the forehead, the spring clamp being attached to it four inches lower down. The most successful rigid support that I have been able to construct was made out of plaster of Paris. I applied a body cast from the hips, including the chest and head, which, after the plaster was well set, I trimmed out very extensively, giving large amount of room for the arms, trimmed out over the abdominal region as much as was possible without weakening the support; also the head was trimmed in such a manner as to

leave only a head band and a strong posterior support. (See Fig. 2.)

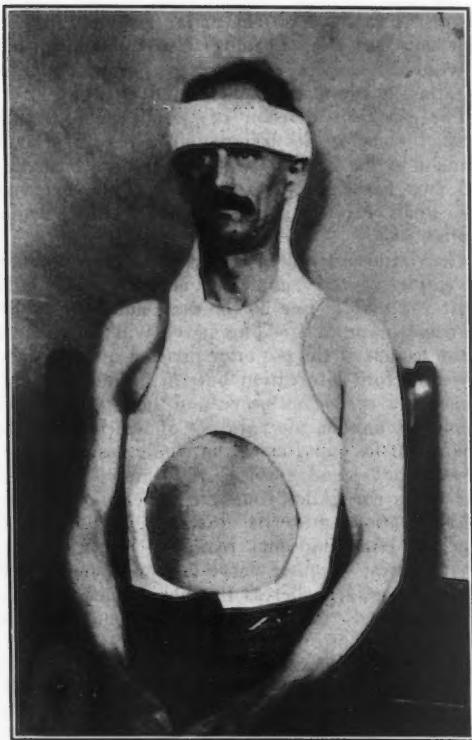


Figure 2.

My cases were rather aggravated than benefitted by the use of these supports, although while they had them on, the patients were able to walk without the assistance of the hands.

Group 5.—Ligation of Spinal Accessory Nerve With Silver Wire. Under this group, I found two cases. Result: One unimproved, one recovered.

This operation was first done by Mayo Collier in 1890.\*18 The procedure consists of exposing the spinal accessory nerve, and placing about it a loop of silver wire, which is twisted tightly.

Group 6.—Division of Cervical Muscles. Under this group, we have fourteen cases. Result: Four improved, three unimproved, seven cured.

Kocher is the chief exponent of this method. The operation for dividing the sterno-cleido mastoid muscle is performed in the following manner: An incision five or six centimeters in length is made, beginning at the anterior margin of the sterno-cleido mastoid muscle, opposite the angle of the jaw and directed slightly upward so as to pass at a distance of from three to four centimeters below the mastoid process and following the natural folds of the skin. This incision gives an invisible scar; the platysma myoides is divided. A grooved director is introduced beneath the sterno-cleido mastoid muscle, which is divided layer by layer. In severe

cases, instead of simple division, from two to three centimeters of the muscle are resected.

The Division of Posterior Cervical Muscles. An incision from the apex of the mastoid process to the middle of the cervical region is made; the trapezius is first divided; then the splenius capitis; then the complexus, major and minor (the great occipital nerve must not be injured); the obliquus capitis is then divided and the wound closed. The recti muscles have little rotating power and can be left intact.\*27

Group 7.—Stretching of Spinal Accessory Nerve. Under this group, one case reported. Result: Recovered.

This operation consists in exposing the spinal accessory nerve and dissecting it free, sufficiently so that one or two fingers may be placed beneath it. The nerve is then stretched—first the distal end and then the proximal, care being taken not to rupture the nerve. This operation is practically obsolete. While it may afford temporary relief, the condition almost invariably returns.

Group 8.—Division of Spinal Accessory Nerve. Thirteen cases mentioned. Results: Five improved, eight recovered.

Operation: The spinal accessory nerve passes downward and backward from the jugular foramen and enters the anterior border of the sterno-cleido mastoid muscle at a point about one and a half inches below the tip of the mastoid process. At this point it should be exposed. Dr. E. Eliot, Jr., from a special study of the course and relations of the nerve, suggests the following method:

"As the nerve is situated at a considerable depth, the incision should be generous, and should extend from the mastoid process above downward to one or two inches beyond the angle of the jaw. The anterior edge of the sterno-cleido mastoid should then be exposed. In the upper part of the wound the posterior and inferior portion of the parotid gland may have to be drawn forward, although usually it does not overlap the muscle. When this is done it is comparatively easy to expose, by blunt dissection, the transverse process of the atlas, as it lies directly below the mastoid process above; while immediately in front of this bony prominence, and running downward and forward from the mastoid process toward the angle of the jaw, is the posterior belly of the digastric. Behind this lie the main vessels of the neck, with the spinal accessory nerve emerging from the jugular foramen, and the operator is certain no harm can be done to these structures as long as he remains superficial to the digastric belly, which, in its turn, lies at a considerable depth—in fact, at about the level of the transverse process of the atlas.

"Owen and Petit have drawn attention to the fact that the nerve usually enters the mastoid muscle at a point opposite the angle of the jaw. I have found, however, in a large majority of cases, that, on leaving the internal jugular it assumes a definite relationship with the transverse process of the atlas. Never above it, sometimes directly over it, usually a fraction of an inch in front of its most

prominent part, the nerve may easily be detected in the small amount of connective tissue that envelops it, and from this point to its entrance into the belly of the muscle, it may be isolated with safety and treated by any suitable procedure. If, exceptionally, it should escape detection, the anterior border of the muscle should be drawn sharply backward at a point opposite the angle of the jaw, the nerve in this way put on the stretch, and by blunt dissection in the adipose tissues that separates the under surface of the muscle from the sheath of the vessels, the nerve may be readily exposed. Usually the nerve passes from under the posterior belly of the digastric, at a point just in front of the transverse process of the atlas, to a point on the deep surface of the muscle just behind its anterior margin opposite the angle of the inferior maxilla. It is sometimes accompanied by a small artery and vein, the latter easily visible, the former a branch of the occipital. Rarely, the nerve lies at a considerable distance from the transverse process of the atlas; in one case, as much as half an inch anteriorly. Here the nerve could be found at its entrance into the muscle, the landmark of the transverse process having failed to localize its situation."

Richardson suggests that if the nerve is not readily found, its position may be ascertained by drawing the finger-nail firmly across the bottom of the wound, a sharp contraction following pressure upon it. The nerve having been isolated, a section of an inch should be removed. Richardson advises, in addition, vigorous stretching of both extremities. After division of the nerve, the spasmodic contraction relaxes and the muscles become flaccid, allowing the head to be brought to the normal position, or if the deformity has become permanent the contracted parts may be divided as in the ordinary form. Fixation of the head is not, as a rule, required. The operation should be supplemented by massage and by muscle-training.\*41.

Group 9.—Division of Spinal Accessory Nerve and Posterior Branches of the Upper Three Cervical Roots. Seven cases given. Results: One improved and six recovered.

Anatomy. The chief posterior cervical muscles that rotate the head are the splenius capitis, the rectus capitis, posticus major and the obliquus capitis inferior. The splenius capitis is supplied by the external branches of the posterior divisions of the second and third cervical nerves; the rectus capitis is supplied by the sub-occipital from the first cervical; and the obliquus capitis inferior, by the sub-occipital and a branch from the second cervical.

An important anatomical point in recognizing the muscles and nerves is the sub-occipital triangle; the two oblique muscles for the superior and inferior border of the triangle running from the tip of the transverse process of the atlas to the spinous process of the axis, and to the occipital bone, respectively. The rectus capitis posticus major, which forms the third or inner border of the triangle, arises from the spine of the axis and is inserted into the inferior curved line of the occipital bone. The sub-occipital nerve emerges from this triangle, and in it the vertebral artery.

The nerves to be re-sected are the posterior divisions of the first three cervical roots. The posterior of the first cervical (sub-occipital nerve) supplies the rectus capitis, posticus major and the two oblique muscles; after escaping from the spinal canal between the occipital bone and the posterior arch of the atlas, it enters the sub-occipital triangle.

The posterior division of the second cervical nerve, just before its bifurcation, gives off a small filament to the inferior oblique. It then bifurcates into two branches, the internal and the external. The small external branch supplies the splenius capitis.

The large internal branch, the great occipital nerve, pierces the complexus about one-half inch below the middle line of the back and then enters the trapezius muscle. This nerve will be involved by the section of the posterior division of the second cervical before bifurcation but, in as much as this is mostly a cutaneous nerve and supplies only the complexus muscle, the paralysis of which would be a matter of no importance, the whole posterior division of the second cervical root may be divided close to its emergence from the spine, and prior to its bifurcation into its external and internal branches. An additional reason is that, from its size, the great occipital nerve is readily found and serves as a guide, whereas the two branches of the second cervical, to the inferior oblique and the splenius capitis, are difficult to find.

The posterior division of the third cervical is much smaller than the others, but is easily found, under the complexus, about an inch below the great occipital nerve just after its emergence from the spine; it divides into the internal branch, which is cutaneous, and the external, which supplies the splenius capitis and other muscles. It is best to divide the main trunk, as it is more easily found than its branches.

Operation. Patient shaved.

1. Make a transverse incision about one-half inch below the level of the lobule of the ear, from the middle of the neck posteriorly, or even slightly overlapping the middle. This incision should be two and one-half or three inches long.

2. Divide the trapezius transversely.

3. Dissect the trapezius and find occipital major nerve as it emerges from the complexus and enters the trapezius.

4. Divide the complexus transversely at the level of the nerve. This division should be made by repeated small cuts, so as not to cut the nerve which is our guide. Then dissect the nerve down from the anterior surface of the complexus; cut, or better, ex-sect a portion of the posterior division before the occipital major arises from it, so as to catch the filament to the inferior oblique muscle. This divides the second cervical nerve.

5. Recognize the inferior oblique muscle by following the sub-occipital nerve towards the spine; the nerve passes immediately below the border of the muscle.

6. Recognize the sub-occipital triangle formed by the two oblique muscles and the rectus capitis posticus major. In this triangle lies the sub-occipi-



tal close to the occiput. It should be traced down to the spine and be divided, or better, ex-sected. This divides the first cervical nerve.

7. An inch lower down than the occipital and under the complexus is the external branch of the posterior division of the third cervical nerve to the splenius capitis. When found, divide or ex-sect close to the bifurcation of the main trunk. This divides the third cervical nerve. Insert a drainage tube and horse hairs; patient lies on back.

*Author's operation for the relief of spasmodic torticollis.* An incision is made along the anterior border of the sterno-cleido mastoid muscle from the mastoid process to the sternum, joined by a transverse incision three inches in length, following the course of the clavicle. The sterno-cleido mastoid muscle is cut free from its sternal and clavicular attachments.

The cervical fascia is divided and the sterno-cleido mastoid muscle, skin, fascia, etc., are dissected free and retracted backwards, well behind the deep vessels of the neck. By carefully separating the sterno-cleido mastoid muscle from the underlying tissue at its upper extremity, it is quite easy to recognize the spinal accessory nerve as it passes into the sterno-cleido mastoid muscle. Do not look too deep; it is quite superficial when such an extensive incision has been made. It can be found about an inch and a half below the mastoid process. After it has been found, it should be freed to such an extent that at least one or two fingers can be placed beneath it; it should then be thoroughly stretched and its several branches should be cut as close to the muscle as possible. Grasp the proximal end with a strong artery forcep and proceed to wind it on the forceps so as to avulse it from its origin.

By careful blunt dissection, posterior to the deep vessels, the transverse processes of the upper cervical vertebrae are soon exposed. The vessels, lymphatics and fatty tissue are retracted forward and the second, third and fourth cervical roots can readily be brought into view. Of these, the second and third roots are divided as close to their origin, and as much of the nerve is destroyed by avulsion and exsection, as is possible. The first cervical root cannot be reached. The phrenic nerve must be located and care taken not to injure it.

The sterno-cleido mastoid muscle is again sutured to its severed sternal and clavicular attachments; the superficial cervical fascia is re-united by fine interrupted sutures, a carefully placed sub-cuticular silk worm gut, in three pieces, closes the wound most satisfactorily and, when carefully done, leaves a very slight scar. A plaster-of-Paris dressing with the head in the normal position is applied, extending around the upper part of the chest, neck and head. It is trimmed out thoroughly to furnish abundance of arm room, also trimmed about the head and face until only a band about the forehead and a strong support in the back of the neck remains. This can be removed at the end of a week or ten days, the sub-cuticular stitches removed, and the patient allowed to leave the hospital with instructions to avoid excitement, to eat plenty of nourishing food and remain out of doors as much

as possible. This is done for the reason that a great deal of blood is lost during the operation and the patients are, as a rule, in a run-down condition. There will probably be some twitching remain, which, however, disappears in from one to three months.

*Conclusion.* Judging from results obtained from the different methods of treatment, there is no question in my mind but that the most satisfactory treatment is surgical.

The simple division of the spinal accessory nerve gives some good results, yet, in many cases, the cure is not complete and a second operation is frequently refused, leaving the patient in a condition little better than he was before the operation. I, therefore, am of the belief that the greatest amount of satisfaction to both the patient and the surgeon will be derived from making the extensive operation which I recommend whereby the spinal accessory nerve and the second and third cervical roots are resected.

It is true that there are cases which are cured by the simple division of the spinal accessory nerve, and the division of nerve roots would be superfluous, but the amount of atrophy and loss of motion following the resection of these two roots is so small, that the damage done by cutting them unnecessarily, really amounts to nothing.

(To be continued.)

#### SPIRAL ORGANISMS IN RELATION TO SYPHILIS.\*

By THEODORE G. DAVIS, M. D., Los Angeles.

So much interest has been manifested in Schaudinn's announcement of the discovery of the organism causing syphilis, and so positive is the evidence accumulating in its favor, that I am led to ask you to consider with me its value as a means of making an early differential diagnosis of syphilis, and in so doing will direct your attention to other spiral organisms present in disease.

With the beginning of last year—1905—the spirochete entered the field as an important factor in the etiology of disease with the discovery by Ross and Milne of the presence of such organisms in the blood of patients suffering from "tick fever" in the Congo Free State. Dutton and Todd later established that they were transmitted by a tick (*Ornithodoros moubata*) which had become infected by biting patients suffering from "tick fever," and Koch confirmed these observations.

For the spirochete of relapsing fever—spirochete Obermeieri—similar relations seem to obtain, for it was long since announced by Karlinski that this spirochete could remain alive in the bedbug (*Cimex* or *Acanthia lectularis*) as long as thirty days, and Schaudinn has demonstrated that the spirochete of relapsing fever multiplies in the intestines of the bedbug and is voided with its feces. The contamination by its feces of the organs by which the insect feeds is a method by which relapsing fever is spread from person to person; it is also transmitted

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by the blood of the insect through abrasions of the skin.

Marchoux and Salimbeni found in a disease fatal to fowl in Brazil, a spirochete that was transmitted by the fowl louse or tick (*argus miniata*), and Sakharoff found in the blood of geese suffering from an epidemic form of septicemia, a spirillum which, when inoculated into healthy birds or transmitted by the biting of the fowl louse or tick, produced the disease—the geese suffering from diarrhoea and dying in about a week. He named this spirillum *anserum*. It resembles the spirochete *Obermeieri* and is actively motile. The fact that organisms causing these diseases in fowls are transmitted by the bite of insects, and that relapsing fever can be transmitted by the bedbug as malaria and yellow fever are transmitted by mosquitoes, suggests the possibility of transmitting syphilis in a similar manner, and this is more probable when we consider the relationship which appears to exist between the causative organisms. The flea may be a possible factor in spreading this disease, as it has been shown to transmit a trypanosome, or the bacillus pestis, from rat to rat and from man to man. And it is not beyond credence that man may be inoculated by biting flies with equine syphilis, known as "Dourine," and it is even possible that a vaccine may be obtained from this source.

As early as 1893 Smith and Kilbourne showed that the "Texas fever" affecting cattle was transmitted by a tick (*Boophilus bovis*), from one animal to another, of the organism *Pyroplasma bigeminum*, and Wilson and Chowning (1905) have reported the infection of man by a similar if not identical organism in the so-called "Montana spotted fever," which they believe to be transmitted by the tick (*Dermacentor*) from the gopher to man.

Metchnikoff and Roux demonstrated that the virus of syphilis did not pass through a Berkfeld filter, and that it was easily injured and destroyed by low degrees of heat, being rendered inactive after heating for one hour at 51 degrees C., or in half an hour it heated to 60 degrees C. Glycerine does not destroy its pathogenic power.

We have long been acquainted with the fact that various spirochete and spirilla inhabit the body, especially the mouth and about the genitals, and Metchnikoff points out that previous writers had suggested the possibility of a spirochete being the cause of syphilis. Donne, in 1837, and Alvarez and Tanel in 1885, referred to this. The organism they saw was doubtless spirochete refringens, but Bordet and Gengou, early in 1902, observed fine spiral organisms in material from a chancre and from a mucous patch, but, as it was not constantly found by them, they did not venture to ascribe etiologic importance to it. Horand (1902) in blood obtained from the arm veins of a syphilitic child, found actively undulating needle-like bodies darting in various directions. Refringent bodies were seen in and around the red blood corpuscles, and red corpuscles containing granules were observed, as well as sporulating bodies, especially numerous in the mucous patches. He concluded the pathogenic agent of syphilis to be a parasite of evolution, a protozoon.

In March, 1905, Schaudinn recognized in a smear preparation obtained from secondary syphilitic papules, a spiral organism which he called spirochete pallida, and which he described as an extremely delicate spirally twisted organism varying from 4 to 14 microns in length (averaging 7 microns) and from an immeasurable thinness to one half of a micron in thickness, having from three to twelve corkscrew-like turns in its middle and tapering in both directions to pointed ends. He believed it to have an undulating membrane, but this was not satisfactorily shown. Flagella have since been demonstrated by Hexheimer and Loser, whose findings Schaudinn confirms, for he has, by means of Loeffler's mordant stain, been able to make out flagella at both ends, and sometimes, if not always, two flagella are seen at one end. He now doubts the existence of an undulating membrane. The organism is actively motile, moving in the direction of its long axis with a rotary motion, coming to a standstill and resuming its course or going in the opposite direction. It also possesses sinuous and undulating movements affecting the entire body. The character of its curves, its tenuous form, as well as its refractivity to stains, makes its identification relatively easy; yet frequently diligent search is required to find the organism, and the fact that upon the ulcerating surfaces of syphilides other spiral organisms, not limited to specific lesions, may be found, adds to the difficulty and sometimes confuses.

In the interior of syphilitic lesions the coarser, more easily staining spirillar forms are less numerous or absent, but usually even here it is associated with the larger, coarser and more readily staining spirochete refringens from which the treponema pallidum can be differentiated by its smallness, delicacy, faint refraction of light and especially in the nature of its coils, which are corkscrew-like, narrow, deeply bent and regular. These characteristics are constant whatever the source of the specimen, whether it be primary lesion, gland, mucous patch, papule, bulla or syphilitic liver, whether the disease be congenital or acquired.

Vuillemin regrets that the probable organism of syphilis should have been called spirochete pallida, a name created by Ehrenberg for the spirochete plicatilis. He proposed the name "spironema pallida" for his spiral protozoon with pointed ends which differs from the trypanosomes in the appearance of the undulating membrane and flagelliform prolongations. As the name spironema had been given to another organism with different characteristics Schaudinn suggested that the new organism be called treponema pallidum, which is more expressive and characteristic. Vuillemin approves and I shall hereafter use this as the name of the organism of syphilis.

Vuillemin adds that upon further investigation the organism will doubtless prove to be a protozoon. This gives greater value to the observation by Horand in 1902 "of refringent bodies as well as granules in the red globules and the presence of sporulating forms," and to the finding by Castellani of spiral organisms in four out of eleven cases of Parangi or "Yaws," considered a modified form of

syphilis, one variety being identical with the organism described by Schaudinn. In three of these cases presenting spiral organisms and one that did not, were also found peculiar oval, chromatin containing bodies, regarding which he does not offer any explanation, but which may be a stage in development or possibly an independent organism.

The constant presence of the *treponema pallidum* in specific lesions, its finding in the blood, in the organs and in the lesions of congenital syphilis, in the experimental lesions produced by human syphilitic virus in monkeys and on the other hand its total absence in any other pathologic condition, appears highly suggestive, although the conclusive evidence for its etiologic character is not yet made out.

It is a very fortunate co-incidence that Schaudinn's discovery was preceded by the success of a number of investigators, Roux, Metchnikoff, Neisser, Flexner and others in inoculating syphilis into monkeys, thus establishing the possibility of dealing experimentally with many of the obscure features of the disease. This possibility will be of pre-eminent importance as to etiology, and we may expect with a great deal of confidence, that it will assist in demonstrating the etiologic role of Schaudinn's organism. The inoculation of these and possibly other animals will doubtless play an important part in elucidating many problems in human syphilis. Among such problem are: The immunity of the mother who gives birth to a child infected by the father at the time of conception; (Colle's law) the occasional occurrence of reinfection and the persistence of infectiousness and transmission of the disease into the third generation, of which a number of examples have been reported. Allow me to review briefly the work done in the experimental laboratory that we may appreciate its value:

Klebs, in 1879, was the first to employ monkeys for experimental inoculations with syphilis; Sperr, in 1886 and 1888, first successfully transmitted syphilis from man to monkeys and proved the possibility of successive transmission of the virus from animal to animal.

Metchnikoff and Roux were led to employ the chimpanzee because of its zoological relationship with man, and this choice was particularly fortunate as this animal reacts in a constant and characteristic manner and follows closely the course of inoculation in humans. After the inoculations, the scarifications quickly healed, no visible lesions appearing until the twenty-sixth day, when a small vesicle increasing in size and becoming indurated was noted on the prepuce; the lymphatic glands of the groin began to enlarge and became readily palpable. Eighteen days after the appearance of the primary lesion, small persistent lesions appeared on the tongue and three weeks later other lesions appeared on the lower lip as well. These erosions were regarded as mucous plaques. Just fifty-six days after the inoculation, papules were noted upon the thighs, abdomen and back. The peripheral zone of these papules was at first red, later becoming pigmented; the mid-zone was paler and became covered in the center with a scaly crust. On scratching, serum exuded. After a month,

these papules healed but markings were visible for some weeks. Later, the animal developed a paraplegia. They also showed that the syphilitic poison was transmissible from ape to ape without undergoing appreciable alteration of quality as evinced by the effects produced.

Neisser's and Lassar's experiments confirm the preceding. They describe secondary luetic papules on the hands, feet and about the anus of apes, which were studied histologically by Becker and Mayer and shown to agree with corresponding lesions in man and similar conclusions were arrived at by a study of Metchnikoff's specimens by Arnal and Salmon. Flexner, from his own experiments, was able to establish the essential identity of experimental and acquired primary lesions and doubtless the use of the higher apes will aid us in time to solve many disputed points in human syphilis.

The question naturally arises, What is this organism found in the lesions of syphilis and what is its relation to other spiral organisms?

In a recent article Blanchard reviews our knowledge of and classifies these organisms, as follows:

I. Spirobacteria, vegetable in origin.

Genera—*Spirosoma*, from the nose and throat.

*Vibrio*, as the comma bacillus, etc. *Spirobacillus*.

*Spirillum*, from stagnant waters, etc.

II. Trypanosomidae: protozoa.

Genera—(a) *Spirochete*, to which belong those found in stagnant water and in the secretions of the genitals and intestinal tract, their ulcerating surfaces and neoplasms. Those found in animals which associate with man, as the dog, rat, etc., and those which have been recognized as of pathological importance, viz.:

*Spirochete* (Obermeiri, 1873) relapsing fever.

*Spirochete, refringens* (Schaudinn, 1905).

*Spirochete, pallidula* (Castellani, 1905), in parangior yaws.

*Spirochete, Vincenti*—ulceromembranous angina.

(b) *Treponema* (Schaudinn) syn. (*Spirochete, Spiro-nema*).

Species: *Trep. pallidum*.

(c) *Trypanosoma*.

Species: *Tryp. Gambiense* (Dutton).

Sleeping sickness and allied diseases; and *Trypanosomes* found in animals (the horse, rat, etc.).

(d) *Trypanoplasma*: found in



fish, frogs, etc. Four species have been described.

Of what value will a comparative study of these spiral organisms be, in making a diagnosis?

When we recall that Blanchard describes nearly two dozen spirillum and twenty-one spirochete, it becomes evident that we must limit the field of our review. The comparative study of these microorganisms shows the vast differences which exist between the spiro-bacteria and the protozoan trypanosomidae to which the spirochete or, more properly, treponema of Schaudinn belongs. It also shows how members of both groups are able to adapt themselves to special conditions of life as parasites and the degree of virulence and the varied roles they play in human and comparative pathology as well as pointing the way to new fields of research.

It is beyond the limit of this paper to consider all of these and I shall be content with calling your attention to those that are commonly found or likely to be associated with the treponema pallidum in the various syphilitic lesions of the genitals, anus, mouth and nose, and those found in the blood. It may be well to state briefly the characteristics of the various groupings described by Ehrenberg and amended by Loeffler and others.

*Spirillum* are rigid cells long, spirally bent, somewhat like a corkscrew with usually a polar bunch of flagella of many long principal and several short accessory ones.

*Trypanosoma*, distinguished by a somewhat long body, are more or less spirally twisted, with an undulating membrane and one to several flagella, together with a "flagellum root" and one nucleus. They are exceedingly motile and vary in size, being two to three microns in breadth by eight to thirty in length. They are transmitted by biting insects.

*Spirochete* are flexible, long, spirally coiling threads possessing locomotion by means of an undulating membrane as well as by flexion and rotary movements. In some varieties, flagella have recently been shown to exist.

We will first consider the long known spirochete of relapsing fever, the spirochete Obermeieri. Large, flexible, motile, threads, coiled like a corkscrew, with pointed ends, 1 micron in thickness, 10 to 40 microns in length. Flagella not known. It stains readily with anilin dyes. It is not stained by Gram's method. Ganther recommends freeing them of part of their albumen by means of a 1 per cent to 5 per cent acetic acid solution before staining.

Historically of interest, is the spirillum plicatile, occurring in marsh water during the summer months, interesting because it was named by Ehrenberg in 1833, spirochete pallida, but it is easily distinguished from Schaudinn's organism by its size, being 2.25 microns in breadth, 110 to 125 microns in length, and by the fact that the ends appear bluntly cut off and the threads have both primary and secondary windings, the former being of equal size, but the latter being often irregular. They exhibit rapid movements and stain readily with anilin dyes. During cultivation they break into long rods,

then short rods and finally cocci, somewhat after the manner of Beggiatoa.

In lesions about the genitals we must distinguish Schaudinn's organism from the spirillum balanitidis, but these stain readily, are larger, coarser, with wave-like curves and blunt rounded ends.

In specific disease of the nose we may find the treponema associated with the spirillum nasalis (of Weibel) which are non-motile curved rods and spirillum-like filaments.

Associated in lesions of the mouth may be the spirillum dentium (Miller), which, though pointed, are ten to twelve microns in length, and the spirillum linguae (Weibel), which occur as spirilla, spirillar filaments, curved rods and involution forms, and are distinguished from the other forms described by Weibel by being stained by Gram's method.

Occurring in saliva and about diseased teeth are curved rods very similar in appearance to the comma bacillus, the spirillum sputigenum (Miller), which has flagella on its sides and not on the ends.

In lesions about the soft palate and pharynx or tonsils, we may also find the spirillum of Vincent's angina associated with the fusiform bacillus. The fusiform bacillus are non-motile, long slender rods slightly bent, 6 to 12 microns in length, somewhat larger in the middle and usually with pointed ends. They do not stain by Gram's method, but stain fairly well with Loeffler's methylene blue and anilin water gentian violet, but best with carbol-fluchsin. The spirillum, also spoken of as spirochete, which is associated with the fusiform bacillus in a symbiotic relation, is long and delicate with 3 or 4 turns and usually actively motile. They stain uniformly but much less intensely than the bacilli and may be easily overlooked. They do not stain by Gram's method and are much more easily decolorized than the bacilli.

I have previously pointed out the differential characteristics of the spirochete refringens, so frequently found associated with the treponema pallidum that the relation of symbiosis has been suggested. The difficulty of satisfactorily and quickly staining this organism of syphilis will doubtless soon be removed. Giemsa's stain has been used by most of the investigators, and, so far, is the base of all satisfactory stains. The modification of this stain for tissues, by Levaditi, by the previous use of silver nitrate has also been applied to smears, and recently Goldhorn's blood stain, intensified by Gram's iodine solution, has given rapid and excellent results.

In the primary sore as well as in the enlarged glands and mucous patches, the treponema is found associated with the spirochete refringens. In the lesion, especially if the chancre assumes a phagedenic character, a fusiform bacillus has been found. This bacillus resembles the fusiform bacillus associated with a spirillum in ulcero-membranous angina (or Vincent's angina) and probably has a similar symbiotic relation. Delamer and Tanasesco state "at times the bacilli assumed the form of spirals and suggests possible developmental relation."

Hirxheimer and Hubner first demonstrated the

treponema in the tissues, and Burnet and Vincent made sections of a chancre of five days' duration, the tissue being stained by Levaditi's method, and found the parasite. Few, in the central portion, but numerous in the papilla and connective tissue, as well as in the zone of infiltration. That the treponema is found in limited areas principally about the blood vessels, explains its absence from many smears obtained from primary sores and mucous patches, and this should be borne in mind when collecting material for examination.

So far as we know the treponema pallidum is the only spiral organism which penetrates the deep tissues affected by primary and secondary syphilis. They invade the tissues and lymph spaces, and in this manner cause adenitis and enter the vascular circulation. The presence of the organism in the walls of the vessels and about them in the perivascular spaces, explains the occurrence of arteritis and periarteritis. The absence of the organism from the indurated areas suggests that the sclerosis resulting from perivascular infiltration by round cells is a factor in the local destruction of the parasite.

Veillon and Girard found the organism in sections of a syphilitic roseola of four days' duration. The section showed intense congestion of the capillaries and beginning perivascular infiltration. The organism being found in the sub-capillary vessels and in the terminal capillaries of the papilla, only few being found in the perivascular nodules. From this it would appear as if the roseola was due to a true parasitic embolus lodged in the terminal capillaries of the skin followed by a perivascular infiltration. It is because of the depth of the tissue invaded that it is necessary to use a long acting blister to obtain serum for examination from the secondary skin lesions of syphilis.

Levaditi, working with Salmon, found the organisms in sweat glands and suprarenals as well as in the hepatic tissue and in the bronchial epithelial cells and pulmonic endothelial cells of a baby dying of hereditary syphilis (sixteen hours after birth). In the lungs many treponema were found along the pulmonary capillaries, and in the perivascular lymph spaces, as well as in the epithelial cells lining the alveoli and bronchial tubes. Hence Levaditi suggests they may be present in the sputum of certain syphilitics and a means of infection.

In the liver, the treponema are abundant around the intralobular venules, from which they appear to radiate into the intercellular spaces between the hepatic cells. They are also abundant in the perivascular tissue and the endothelial walls of the vessels, but none were found in the lumen of the vessel. Yet their perivascular distribution points to their dissemination by the vascular system, primarily from the lymph spaces by the lymphatics.

In the section of the liver of a child who died four hours after birth of syphilis and which had been stained by Levaditi's method I found the treponema about the liver cells in the intercellular spaces more delicate and lighter staining than those in the spaces between the connective tissue cells of the portal tracts or even about the blood vessels.

This variation in the appearance of the organism is supported by the observations of Richards and Hunt, who state that it appears in three forms, possibly developmental, evolution or involution forms, differing in thickness, length, and the number of spirals; one form being thick and straight or but slightly curved, a second of the same thickness but with the well defined spirals, and the third exceedingly thin, distinctly spiral, with a large number of turns and very long, the latter being found in the deeper tissue. Most of the observers believe these to be distinct forms. Besides this, I found globular cells with granular bodies deeply staining such as are described by Horand in the blood from an arm vein of a syphilitic child and by Castelleni as occurring in "yaws." These cells contain six to eight or more distinct granular masses regularly arranged, some of them globular in form, others more nearly oval, larger and roughened, apparently approaching the periphery of the cell. In one instance it appeared as if the cell wall had ruptured and they were about to be extruded. These granular masses, arranged in regular form, recall the state of complete segmentation observed in the malarial infection and similar to that described and figured by Mallory as occurring in measles and scarlet fever, and to the primary sporoblasts occurring in the nuclear stage of the development of cytortyces variola s. vaccinae.

We should not forget in this connection the possibility of these bodies being the Cytortyces lui, discovered and described by Siegel, and which can usually be found in the circulating blood of syphilitics, the cycle of development of which has been followed through monkeys after inoculation, and the findings of Siegel confirmed. It is quite possible that this flagellate has some bearing upon the cause of syphilis, and it is not beyond reason to think there may be some connection between the two organisms, and Schutz calls attention to the way in which both are always found together and close to or inside the red corpuscles.

One must of course be cautious, but, from the overwhelming array of evidence presented in literature, I feel we must conclude that the treponema pallidum does not occur in the healthy tissue of man or monkeys nor in tissues affected with other than syphilitic lesions. From its constant occurrence in syphilitic lesions and its absence in healthy or otherwise diseased tissues, one may assume with probability bordering on certainty, that this organism is the cause of syphilis.

I feel that we may conclude with Metchnikoff that taking everything into consideration the evidence points toward syphilis being a chronic spirillosis.

Levaditi considers congenital syphilis as being, usually, *an acute form of the disease*, although it may assume a subacute or chronic form. Neisser found the blood of children with inherited syphilis swarming with the organisms, and inoculation of apes was always positive, an observation confirmed by Hoffman. A monkey inoculated with mucus from the nose of such a child gave positive results. Two children, apparently healthy until several

weeks of age, and in whose history no suspicion of syphilis existed, developed the disease. Neisser suggests that an examination of the blood or secretions might have shown the organism and an early diagnosis have been made.

The methods in laboratory diagnosis will vary with the stage of the disease. We may examine the blood or secretions. We may examine scrapings from the primary sore or excise it and make sections. We may aspirate and examine fluid from an infected gland or excise and prepare sections; we may examine the deep scrapings from a mucous patch or the serum obtained by a slow and deeply acting blister over a secondary skin lesion or we may excise and section the same and, lastly, confirmatory inoculation of apes or monkeys may be made.

My object in bringing this subject before you is to point the way to the early recognition and differential diagnosis of syphilis, a matter of the greatest importance to the physician, the individual and the community.

Answering queries and closing, Dr. Davis said: I believe the presence of the organism in such great numbers in the walls of the blood vessels explains the arteritis and periarteritis which occur in syphilis.

As to the methods of transmission to the offspring by the father or the mother, there is no doubt but that the ovum is affected directly from the mother and through the spermatozoa from the father, but the form in which the organism exists has not been determined. Neither has the form in which the organism is present in tertiary lesions been demonstrated. It may be in a developmental or "resting stage"; but from the histological analogy of the gumma to a tubercle, it is possible that the organism exists in a condition very difficult to stain, similar to the bacillus tuberculosis in tubercle.

This I believe is probable, for contrary to what has usually been taught, Neisser states "that positive results are obtained in all inoculations from tertiary lesions, if these lesions have not undergone necrosis or suppuration; but if specific gummatous degeneration or suppuration has occurred, then the inoculations are never successful."

Patients from whom some of these inoculations were made had acquired syphilis ten or fifteen years before. It appears immaterial whether the tertiary manifestations occur at an early or a very late stage of the syphilitic infection.

Neisser therefore warns that every tertiary manifestation should be regarded as *contagious*, although the danger is much less than in primary or secondary manifestations.

#### TECHNIC AND STAINING OF TREPONEMA PALLIDUM.

By E. L. LEONARD, M. D., Los Angeles.

The *treponema pallidum* has been demonstrated by many independent observers in chancres and mucous patches, but as yet no one has found the organism in tertiary lesions. Levaditi demonstrated the *treponema* in the liver, suprarenal gland, lung and other organs of an infant having

congenital syphilis, sixteen hours after death. He also found large numbers in the sweat glands.

In obtaining material from chancres, Burnet and Vincent report the parasites rare in the center, but very numerous in the papillae and connective tissues in the zone of infiltration. Specimens should be made from deep curettings. The organism may be seen without staining, but this is very difficult on account of its delicate contour. It is motile, with a rotary motion forward and backward.

Closely associated with *treponema pallidum* in syphilis is another distinct organism, spirochete refringens, which has been found in other diseases besides lues, such as carcinoma, tuberculosis, acute gonorrhea, acne vulgaris, impetigo, etc.

The *treponema pallidum* is difficult to demonstrate where pus is present. Very few are found superficially in primary and secondary lesions, but they are more abundant in the deeper tissues. In centrifuged specimens of blood organisms have been found, but they are not present in large numbers in the peripheral circulation.

So far as reported, *treponema pallidum* has been found in the following locations:

1. Juices of glands.
2. Chancres.
3. Flat condylomata (deep and superficial).
4. Inguinal glands.
5. Splenic blood.
6. Roseola.
7. Congenital syphilis.
8. Centrifugalized peripheral blood.
9. Excised papules.
10. Veins of syphilitic child.
11. Mucous patches.

In gumma and other tertiary lesions, none have ever been demonstrated.

Methods of examinations from fresh tissue fluids are as follows: Wash the surface with normal salt solution, use cocaine if necessary and curette the lesion rather deeply below the surface. Smear on a clean slide or cover glass. Hypodermic needles may be used for aspirating glandular fluids. The smears should be made very thin. The most satisfactory method of staining is Giemsa's method.

Fix smears in the air or in osmic acid fumes. Harden in absolute alcohol from 25 to 60 minutes.

Stain should be diluted ten times and smears covered for ten to twenty minutes. Better results are obtained if a one per cent carbonated potassium solution be added to the diluting water. Wash in distilled water, dry and mount.

The *treponema pallidum* will be found after diligent search, stained a faint pink. The spirochete refringens is usually present in large numbers, and is to be distinguished by its larger size and prominent outline and deeper staining. Many modifications of the Giemsa method have been employed by Marino, Wright, Leischman, Zabolotny and Loeffler with varying results, but Giemsa's method seems to have been most widely used. Dr. L. B. Goldhorn has prepared a special modification of his polychrome methylene-blue blood stain suitable for demonstrating the *treponema pallidum*. Staining is complete in from two to five seconds. By the use of this stain distinct flagella may be demonstrated on spirochete refringens, but none have been found on the *treponema pallidum*.

Fresh specimens have been examined, and although the *treponema* is highly refractile and ac-



tively motile, it is exceedingly difficult to find on account of the delicacy of its outline.

Levaditi, assistant to Metchnikoff at the Pasteur Institute, has made a special study of sections of syphilitic tissues and the staining method used by him gives very beautiful results.

1. Place in one per cent silver nitrate for three days.

2. Pyrogallie acid, 4; formalin, 5; water, 100. Leave in this solution twenty-four hours.

3. Wash in water and stain with undiluted Giesma stain three or four minutes.

4. Clear with oil of cloves, bergamot or xylol.

*Treponema pallidum* stains black and appears very much swollen by the silver nitrate. Cells are blue and connective tissue yellowish green. Care should be taken not to make the sections too thin.

This method seems to be of more value for tissues than the others studied, although many modifications have been worked out by various investigators, who report fairly good results.

On account of the fact that the organisms are so abundant in the perivascular spaces, it is presumable that the vascular system is the mode of transmission.

The practical application of all this technical work is of great importance and may be used in many ways of confirmative proof that the lesions existing are syphilitic. Deep scrapings from chancres and mucous patches, aspiration of glandular fluids and the examination of fluids from secondary skin lesions, all show the organism. Examination of the serum after the application of the slow and deeply acting blister, has been proved to contain the *treponema*. Levaditi suggests that as the organisms are present in the alveolar and bronchial epithelium of the lungs, they may be present in the sputum of certain syphilitics.

One would infer that the demonstration of this organism was as simple as that of a certain malarial parasite, while, as a matter of fact, our search for these tiny delicate bodies has occupied many hours.

### "SUBNORMAL ACCOMMODATION AS A MANIFESTATION OF HYSTERIA.\*

By F. B. EATON, M. D., San Francisco.

The term "subnormal accommodation," which has a considerable vogue, is open to the objection that it is merely a symptomatic title. The condition certainly has been largely overlooked in the routine of eye tests, and the indications it affords for treatment have not been either recognized or utilized as they should.

For a good many years I have carefully recorded the range of accommodation in all cases of refraction, and in addition have systematically tested the practical utility of the rules of Landolt, i. e., that one-third of the amplitude of accommodation, and two-thirds of the amplitude of convergence must

physiologically be kept in reserve for comfortable binocular vision. My findings emphatically corroborate the statement of Landolt. But, with other observers, I have been puzzled at times by contradictory findings. It is well known that deficient range of accommodation is common in the neurasthenic, anemic, etc., and, as a routine the oculist prescribes tonics, full diet, and the like, telling the patient that his "glasses" will relieve him only after he has been "built up."

Gradually I have come to recognize as typical, a group of asthenopic cases presenting a decidedly contradictory complex of symptoms.

These asthenopes are generally young—under 35. Some are children. Usually the ametropia is moderate in amount, and most often is a hyperopic astigmatism. But all are either deficient in accommodation or convergence, or both; and not all, by any means, show evidence of ill health.

About twelve years ago, Parinaud, chief of the eye clinic of the Salpetriere Hospital in Paris, as the result of an exhaustive study of many hundreds of cases of hysteria seen at the Salpetriere, announced that the earliest and most constant symptom of the condition is a diminution of the range of accommodation simulating a paresis of the ciliary muscle. Convergence insufficiency is also nearly always present. Moreover, he found that true to the vagaries of hysteria, both accommodation and convergence presented certain puzzling variations. For in hysterics the far and near points of both these functions approach each other. That is, the far and near points of accommodation in approaching each other give rise to subnormal accommodation for near and spasm of the accommodation for distance; but spasm for near is often present. Likewise, the near point of convergence is farther off than normal (exophoria), and the far point nearer for distance (esophoria, convergence excess).

These anomalies of the functions I term paradox symptoms. Parinaud found that they are frequently present in children as the earliest manifestations of hysteria, and states that Charcot relied upon them in arriving, in difficult cases, at a diagnosis of the neurosis. Therefore it behooves the oculist to be on his guard whenever these paradox symptoms are present in patients of either sex; and to inquire patiently and carefully into the family history of such individuals, if he has not already done so. If he does not, he is doomed to failure in his attempts to relieve many cases of asthenopia by optical means; and this in spite of the most painstaking and accurate correction of the ametropia; glasses affording only partial, or no relief for the near. Naturally, any marked deviation from normal health, especially organic conditions, must be taken into consideration.

Treatment: Obviously treatment is to be directed against the hysteric neurosis. What will it be? Drugs have their limit. Psychic should be the basic treatment. Though the prejudice against waking hypnotic suggestion is melting away, comparatively few physicians employ it in America, either from fear of opposition and ridicule on the part of their wiser (?) colleagues, or from unad-

\* This paper, read in the Section on Ophthalmology of the Medical Society of the State of California, April 17th, 1906, was destroyed by fire. It is rewritten from memory.

mitted ignorance of the same wise ones of the physiology and psychology of hypnotic therapeutics.

Personally, I need not hesitate to state my belief that a wise and skillful use of waking suggestion is the remedy par excellence for the condition here considered, neglecting, of course, no clear indication for tonic or other treatment. To show that such suggestive treatment, though unconsciously employed, is no new thing, I beg to recall the once familiar and successful method for the cure of asthenopia devised in the '60s by Dr. Dyer. His method was simple. The patient was instructed to read for five or less minutes three or four times first day, and by a watch, no more, no less; and to add one minute each day. By the time this had aggregated half an hour the patient generally was nearly well. This was a purely suggestive form of treatment, the watch, the positive directions, etc., acting upon the patient's mind. Similarly I have found the so-called "muscular exercise" by means of prisms base out for convergence insufficiency, acts mainly through suggestion. The interni are normal in strength in all but high, uncorrected myopia. It is the arousing of the will to converge and accommodate, and the absolute assurance by the physician, of relief, that accomplish the end. One case may be cited to illustrate what may be termed masked hysteria manifesting itself ocularily:

Miss M. S., aet., 24, complains of eyeache, severe headaches; blurring for near, etc. Health excellent; good sleeper. Sometimes tires easily; can use eyes comfortably for about fifteen minutes. Status Obj. V. O. U. 6-5. Punct. prox. accom. O. U. 3D. exophoria in accom. 10 degrees.

These results led to a closer inquiry into her history. It transpired that her mother for 16 years had not been able to leave the house alone because of unfounded fear. "Nervous fear of being left alone." One sister is "peculiar, and has something the matter with her brain. She is 23."

Now, had I not been put on guard by the contradiction of a robust patient with normal refraction, having only 3D of accommodation at the age of 24, I would, perhaps, have assumed neurasthenia, etc., as the only troubles to be treated; whereas the defective accommodation was hysterical, as also shown by spasm of accommodation. This is a common type of patient met with in over-worked and anxious students, who are also often under-nourished. I therefore commend to my colleagues a consideration of the facts presented by Parinaud and herein.

#### NOTES ON HYDROCYANIC ACID POISONING.

By T. C. McCLEAVE, M. D., Berkeley.

The infrequency of recovery after hydrocyanic acid poisoning may perhaps give the following report at least some clinical interest, although it contains no new or important scientific data.

A Berkeley hostelry being infested with roaches, the entomologists of the University were appealed to for aid in their extermination, and it was decided to apply to the house the method which is used to rid trees of insects. To this end, potassium cyanide and

sulphuric acid were placed together in a receptacle and the vessel was set in the pantry in the cupboards of which the insects appeared chiefly to have their habitat.

The vapor generated by this chemical admixture is hydrocyanic acid, exceedingly deadly and highly volatile, and although it was supposed that precautions had been taken to limit it to the immediate vicinity of the pantry, the fumes diffused between the partitions to distant parts of the house, and especially passing upward through an open clothes chute, escaped into a room above through defects in the walls, quickly overcoming the occupant.

This young woman, who had retired but was reading in bed, afterwards described her sensations as follows: She first noticed the peculiar odor of the gas, and immediately feeling nauseated arose to get a drink of water and open her window. She drank the water but was so overcome by vertigo that she had to lie down at once. She then vomited copiously, after which she felt for a brief period a terrific "fullness and swirling in the head," almost immediately, however, losing consciousness. She either fell or tried to get out of bed again, for persons passing along the hall, and, attracted by her loud breathing, breaking in the door, found her almost moribund upon the floor.

The symptoms were as follows: There was very profound cardiac and respiratory depression and extreme cyanosis. The pupils were widely dilated, conjunctivæ deeply injected, and there was marked congestion of the nasal and buccal mucosa. The lips were covered with white froth, and there was trismus and general muscular rigidity, with occasional tremors over entire body. The skin was blue, cold and moist. Urine was voided involuntarily. The patient, as before noted, became quickly unconscious and remained so for some six or eight hours. Recovery seemed hopeless. Treatment consisted of artificial respiration, external heat, the prolonged administration of oxygen, and the free hypodermic use of the usual cardiac and respiratory stimulants. Epinephrin, given hypodermically in the subclavicular region in a single dose of 45 minims, 1-1000 solution, was followed at once by improvement in the cardiac action, and, I feel, very largely determined the recovery of the patient. The respiratory and cardiac functions gradually became stronger, the muscular rigidity disappeared, and a recovery progressed; in about 3 hours vomiting again began, the vomitus being of a character to indicate some extravasation of blood into the stomach.

This nausea and vomiting persisted about 48 hours. There was again the violent headache and extreme prostration, recovery not being complete for many days. The cyanosis persisted for several days, the fingers and toes especially being almost black long after the circulation was well reestablished, undoubtedly dependent upon changes in the blood itself. This was also so with all the patients referred to later. The blood of one on the second day showed somewhat less than 4,000,000 red cells, and 9,000 whites. The differential count was normal and the red cells showed no abnormality in structure. There appeared to be some free pigment.

\* Read before the California Academy of Medicine, January, 1906.

There was unquestionably considerable hemolysis, though no immediate blood examination was made. The urine was scanty and smoky for several days, but showed no albumin.

In addition to this patient, everyone assisting in removing her from her room, some five or six persons, was also overcome by the deadly vapor. Included in this number was a physician living in the house, who, after instituting the proper measures for the restoration of the patient, was herself rendered sick and helpless, hence my participation in the events described. Even I, on my arrival encountered sufficient of the gas in the air and in the breath of the patient as I worked over her to suffer some slight poisoning. Each of these persons suffered the same terrific headache, vertigo, distressing nausea and vomiting, and extreme prostration, and each presented in a lesser degree the appearance of the first patient. All were sick for several days. I myself experienced only a slight vertigo and a sense of weight upon the chest and of constriction of the throat, with more or less bronchial irritation, transient disturbances, sufficient, however, to give me some personal appreciation of the terrible potency of the poison.

This group of cases was very interesting, terminating happily as they did, and I think perhaps unique and therefore worthy of record.

#### SURGICAL ANESTHESIA WITH HYDROBROMATE OF HYOSCINE AND MORPHINE.

By EMORY LANPHEAR, M. D., Ph.D., LL.D.,  
St. Louis, Mo.

Much has been written of the scopolamine-morphine combination as a substitute for chloroform and ether for surgical anesthesia; recently this has been rather against it because the *Medical World* collected 14 deaths from its use in 1500 cases—rather a startling contrast to the mortality from chloroform, 1 in 2,075, or ether, 1 in 5,112 (Gurlt's statistics, based on analysis of 300,000 cases). In the *International Journal of Surgery* (February, 1906) Abbott, of Chicago, called attention to the fact that scopolamine and hyoscine are identical from a chemical standpoint. Knowing that hydrobromate of hyoscine is a drug of known strength and especially valuing the fact that it is, apparently, perfectly safe—whereas scopolamine is notoriously unreliable (Merck saying that scopolamine of —20 rotation is serviceable, but that much of the drug on the market is as low as —2 rotation and practically valueless) I determined to give it a trial. I have made a thorough test and as a result I think I can say it is nearly or quite as effective as scopolamine; and perfectly safe in appropriate cases.

Among the operations done under this form of anesthesia may be mentioned hysterectomy, two for strangulated hernia with resection, decapsulation of the kidney, trephining, abdominal section for appendicitis, hydrocele, posterior section for abscess of liver, trachelorrhaphy, perineorrhaphy and radical cure of hernia. One of the herniotomies required more than two hours, during which the patient

moved but once; she remembered nothing of the operation next day.

Precautions.—Certain precautions are essential: (1) The hyoscine should be free from atropine, since atropine exactly antagonizes the effect sought for, hence the hydrobromate of hyoscine used must be from a reliable manufacturer; and there must be no atropine in the morphine tablet.

(2) The utmost silence must be preserved in the operating room; otherwise the patient becomes restless and finally wide awake and excited.

If there is to be discussion as to the nature of the trouble or the character of the work to be done, the patient's ears should be plugged with cotton, or a few drops of chloroform given at the critical point so he may not become agitated from hearing the conversation.

(3) It should not be used in the very young, nor in those of extreme old age. Possibly it may be of danger in serious heart lesions. Abbott says it should not be given to those the subject of far-advanced nephritis. If the patient is nervous it is well to tie the hands behind the neck so that a sudden movement may not contaminate the field of operation.

(4) The stomach and bowels should be empty, as for chloroform anesthesia.

(5) A fresh solution should always be used because old ones decompose readily, just as with scopolamine.

Method of Using.—The method of using is as follows: One hour or more before the operation one-fourth grain of morphine and one one-hundredth of a grain of hydrobromate of hyoscine are given hypodermically. At the end of the hour the patient is put upon the operating table and allowed to go to sleep there; if not tranquil in a few moments, a second dose of the same size is given. There need be no hesitancy about the half-grain of morphine; the hyoscine antagonizes certain of its effects, so there is no likelihood of danger. If anesthesia is not complete a half-hour later, a few drops of chloroform by inhalation will cause almost instant snoring.

Effects.—(1) The analgesia appears to be complete for many hours. In two cases where loss of blood was great hypodermoclysis was ordered several hours after the patient was returned to bed; there was no indication of sensation when the large needle was introduced.

(2) The first effect is an excitement—in two of my cases delirium developed—with slight dilatation of the pupils. Then the patient becomes quiet and the pupils are midway between dilatation and contraction. Soon, in favorable cases, deep sleep follows.

(3) After the second injection (which arouses the patient) profound sleep will be noted in most cases; but some subjects insist upon muttering or even talking throughout the operation, though making no complaint about being hurt.

(4) Sleep continues for many hours in most instances if two injections are used. Friends must be advised in advance that the sleep may continue twelve hours or more.

\* Read at the Annual Meeting of the Nevada State Medical Association, May, 1906.



(5) The patient can be aroused at any time by shaking or a loud command, and may be made to assist in changing position or to sit up for application of bandages, etc. In two or three minutes slumber is again deep and other operative work may be done.

(6) The secretions are not interfered with.

(7) Peristalsis is not arrested, as one would expect from so large a dose of morphine.

Remarks.—(1) Women seem to require less than men (which is true of any anesthetic).

(2) Ether should not be given with the hyoscine-morphine combination; if anything is needed chloroform is best.

(3) A beautiful thing about the method is the absence of vomiting—of great importance in abdominal surgery. Another favorable feature is the absence of post-operative pain; patients usually sleep all night following an operation and awake next morning demanding breakfast.

(4) It should be the ideal method of producing anesthesia for obstetrical work, particularly for delivery with forceps.

(5) Suggestion unquestionably plays an important point in the efficacy of the combination. (a) At the outset I say to the patient, "I am giving you an injection of medicine which will make you feel no pain, so ether or chloroform will not have to be used; go to sleep." (b) When the patient is upon the operating table ready for the second dose, if one be needed, I say, "You will feel no pain. If during the operation you are not asleep and know what is being done, do not move, and particularly do not kick or strike. Go to sleep, now, and remember you will not be hurt." By the time everything is ready, instruments sterilized, etc., the patient is usually asleep or nearly so. (c) During operation if the patient moves I say, "Lie still, it will not hurt." And so the suggestion is complete.

Disadvantages.—(1) The only serious disadvantage I have noted is that muscular relaxation is not absolute; so it is not applicable to very delicate work like that on the eye.

(2) It cannot be used *with a crowd around*, as in a clinic.

Advantages.—(1) Economy. About two cents covers the entire cost of several hours' anesthesia.

(2) No assistant is necessary in many operations—save as a precaution against law suits (abortions and the like).

(3) No nausea or vomiting; of especial advantage in abdominal work.

(4) No pain (or little) after operation; a great inducement to patients reluctant to submit to surgical treatment.

(5) Absence of fear of chloroform or ether on the part of either surgeon or patient; the advantage of not having to hurry because the patient does not take the anesthetic well, can scarcely be overestimated.

#### AN APPLICATION OF TREATMENT BY INDUCTION OF HYPEREMIA TO SMALL-POX. FROM SAN FRANCISCO ISOLATION HOSPITAL NO. 1.

To the Editor of the State Journal:—Within the last two years the treatment of various pathologi-

cal lesions by artificially induced hyperemia has attracted increasing attention. It is now some six years since Bier announced the value of the method and its application to the treatment of joint disease. Later, his experiments were made to demonstrate the utility of this therapeutic measure in cases of skin infection.

Von Ebberts, of Montreal, has suggested that the efficacy of this treatment depends, as do the vaccination methods of A. W. Uright and the Finsen light's therapeutics, on a flooding of the diseased tissues by blood thus artificially induced.

In the contagious pavillion of the San Francisco County Hospital during the past year, we have treated some fifty cases of erysipelas by the application of a mixture containing equal parts of ichthyol and tincture of iodine. The method has given us uniformly good results, in most cases securing a distinct reduction in the duration of the disease. It has seemed probable that Von Ebbert's explanation of the rational of the Bier treatment would explain the success of this measure, for the iodine is certainly inductive of hyperemia.

With these ideas in mind, especially remembering Bier's success with superficial abscesses and skin infections, one seemed warranted in attempting to apply the principle to the treatment of smallpox. It is hardly feasible to apply a mixture of iodine and ichthyol to the whole body, so the paste was applied to the face in the hope that the scarring would be lessened, while a hot iodine bath was used to produce hyperemia of the body. Our cases have not been sufficient in number to draw material for a final report, but we have applied the treatment in seven cases, five discrete and two confluent. In none of the discrete cases was there any pustulation of those papules that had been painted, and the abortive papules quickly reverted and disappeared without scarring. In the two confluent cases the pustulation was very markedly modified, the smelling of the skin lessened and the healing of the lesions hastened. So much so, that on the fourth day after the application the face was clear of crusts and pus, and to our surprise the general condition of the patient seemed modified for the better, the secondary fever ranging only between 99° and 100° and enduring but two days.

The routine of treatment is to bathe the patient in a cleansing antiseptic bath, then if the face is swollen and painful to apply iced lead lotion. A mouth wash of 2% alumnol is provided and the nurse washes the mouth frequently with peroxide of hydrogen, glycerine and water. The eyes are washed with an alkaline wash and a few drops of 20% argyrol instilled morning and night. Cold compresses are then applied to the eyelids. After a few hours the face is painted with the iodine ichthyol. Usually the application is grateful, but if the mixture is not freshly made and thoroughly mixed before applying, there may be some complaint of burning. The slight irritation soon ceases in any case and in our limited experience the results in modifying the secondary infection and limiting scarring have been excellent. It is possible that the ichthyol forming an application impervious to light may aid the work of the hyperemia induced by the iodine, for many authorities seem convinced that the scarring is lessened by a restriction of light. A second application is made twenty-four hours later and if necessary a third. The crusting of the confluent cases usually occurs rapidly and the face is cleaned by the application of antiseptic poultices which rapidly clean the skin and leave it not smooth but in a much better condition than is the case after any other treatment within my knowledge. Iodine baths, 1 oz. of tincture to the gallon, are used for the body and have a definite effect in modifying pustulation.

I have no wish to claim that the method here outlined is an addition to our armamentarium; the list of cases is much too limited. But I do feel that

there is a promise of help for the patient, and I hope that others will give the routine a trial.

I hope in the near future to be able to present a detailed clinical report covering a considerable number of cases.

LANGLEY PORTER.

## COUNTY SOCIETIES.

### ORANGE COUNTY.

The Orange County Medical Association held its regular monthly meeting Oct. 2nd. There were present fourteen members and one visitor. The local agent of the New York Life Insurance Company came before the society, urging them to alter their by-laws to allow members to examine for that company at a less rate than \$5.00. He read extracts from the New York law governing the expenditures of an insurance company for new business, and urged that with this law it was impossible for the company to pay five dollars for examinations. He admitted that the law would not be in effect until Jan. 1, 1907, and could give no good reason why they cut the fee so long before that time. The society took no action in the matter, deeming it best to adhere to their resolution to charge \$5.00 or nothing.

Dr. Beebe presented the paper of the evening, subject, "Cholecystitis with Gall Stones," dealing specially with the factors causing gall stones.

H. S. GORDON, Secretary.

### PLACER COUNTY.

The Placer County Medical Society met on the evening of October 6th, in the Auditorium at Grass Valley. The meeting was called to order at 8:00 p. m. by the President. The object of the meeting was to discuss the insurance situation now existing in Nevada county. Dr. Parkinson of Sacramento, the Councillor of District 3, was to have been the guest of the evening but was unavoidably detained. The insurance question was laid over till another meeting.

Three committees were appointed. One to draw up resolutions from the society concerning the careless way that physicians in the low lying district have of sending tubercular patients to the hills utterly unaware of their condition, and utterly regardless of others with whom they may come in contact. A second committee was appointed to revise the constitution of the society, and a third to attend to the legislative branches of medical practice in the state.

The following clinical material was presented to the members: A case of successfully treated fracture of the sacrum; a case of hypertrophic cirrhosis of the liver; air-gun shot wound of the orbit; a case of elephantiasis of the leg; a photograph of a supernumerary mamma on the arm of a man; a case of Renaud's disease of the hands showing the line of demarcation at the proximal phalanges. A pathological specimen of a stony heart with huge plates of calcification almost covering the heart.

Dr. Tickell read a paper on erythromelalgia which was a report of a case recently occurring in his practice. Dr. Mules read a paper on the Bier passive hyperemia treatment in inflammatory conditions. Both papers were fully discussed.

The following were elected to membership: Arthur Dangerfield, A. H. Ashby, E. C. Fabre-Rejotte, Lena Geraldson, P. Mix and Frank Walsh.

After the meeting the members adjourned to partake of a lunch generously supplied by the President, Dr. Jones.

J. H. MULES, Secretary.

### SACRAMENTO COUNTY.

A regular meeting of the Sacramento Society for Medical Improvement was held Sept. 18, 1906, at the office of Dr. W. A. Briggs, President Dr. H. E. Wright in the chair. Present: Drs. Baldwin, W. A. Briggs, W. E. Briggs, Culver, Dufficy, Fay, Hanna, Henderson, James, Kerby, Look, McKee, McLean, Mules, Nichols, Parkinson, Pitts, G. L. Simmons, S. E. Simmons, Strader, Twitchell, Wilder, Wright, Hendrikson. As visitors, Dr. E. C. Turner and Chas. McKee.

Election of members: The Secretary having reported that the application of Dr. Geo. Briggs was in the prescribed form, that he held a diploma from Univ. of Cal., 1905, and a State of California license, 1906, a ballot was taken and the applicant unanimously elected a member.

Communications were received and filed from the Santa Barbara County Medical Society enclosing the programs of their July and August meetings. New Business: Dr. Parkinson, President of the Northern District Medical Society having reported that the annual meeting of that society would be held in November of this year, an invitation to that society to hold its annual meeting in Sacramento was extended by a unanimous vote of members present.

Dr. Parkinson reported his selection by the Council of the State Society to fill the vacancy in the position of Councillor from this district left by the death of Dr. Thos. Ross.

Dr. McKee, state senator from this district, called the attention of the society to the fact that General letter No. 1, from the Secretary of the State Society reported incorrectly the motion made by Dr. McKee at the meeting of the House of Delegates held on the evening of April 17, 1906, relative to the appointment of local committees in each senatorial district to confer with the members of the legislature on medical matters. That it had been his purpose to advocate the appointment of these committees after election and from among those members of the profession in the various districts who would be able best to work in harmony with whomever might be elected, which latter advantage would be entirely lost by appointing the committees at the present time. The secretary of this society was instructed to call the attention of the secretary of the State Society to the senator's statement and the suggestion embodied therein.

Report of cases: By Dr. Mules, a case of remittent phlebitis of both lower limbs, complicating advanced pulmonary tuberculosis.

By Dr. Twitchell, of paralysis of the radial group of muscles following the injection of boiling water hypodermically over the radial nerve by a morphine habitue who was endeavoring to practice asepsis. The paper of the evening was by Dr. J. T. Culver, on the topic "Sterility in Women." Discussion opened by Dr. W. A. Briggs and then becoming general. The next meeting to be with Dr. Dufficy on the third Tuesday in October.

E. M. WILDER, Secretary.

### VENTURA COUNTY.

The regular meeting of the Ventura County Medical Society was held on Monday evening, October 1st, at the residence of Dr. J. C. Bynum, Ventura. Dr. Bynum read a well prepared paper entitled "The Benefit of Electricity in Certain Forms of Diseases." The X-ray, the high frequency, galvanic and faradic currents, were in turn adverted to, and their peculiar potentialities shown. President Cunnane opened the discussion, and was followed by all the members, each of whom showed himself familiar with the very latest developments of this wonderful and ever growing science.

At the conclusion, the society extended a vote of

thanks to Dr. Bynum for his very interesting discourse. Following this came an invitation to partake of a fine repast, which was served by Mrs. Bynum, assisted by her charming daughter, Miss Ruth. The dinner was voted a success, and was greatly relished. Host and hostess were given the thanks of the society for their cordial reception.

CHARLES TEUBNER, Secretary.

#### SAN JOAQUIN COUNTY.

The regular monthly meeting of the San Joaquin County Medical Society was held at the office of Dr. E. A. Arthur, Sept. 28, 1906. Members present: Drs. E. A. Arthur, S. E. Latta, R. B. Knight, A. W. Hoisholt, J. P. Hull, Ira B. Ladd, J. D. Dameron, H. W. Taggart, S. W. R. Langdon, H. E. Henderson, C. H. Harry and B. J. Powell; Drs. Cross and Smythe as guests.

It was the first meeting of the society since June, there being no regular meetings in the months of July and August. A committee of five was appointed to make suggestions as to the changing of the present fee bill and to report at the next meeting. It was determined to invite a few of the eminent men of the state to read papers or deliver lectures from time to time to the society. Dr. Arthur read an interesting paper on "Gonorrhea." The discussion was opened by Dr. R. B. Knight and participated in generally by the members present. After refreshments the society adjourned.

BARTON J. POWELL, Secretary.

#### PUBLICATIONS.

**A Compend of Operative Gynecology.** By William Seaman Bainbridge, M. D., The Grafton Press, New York.

This is a small volume of sixty-six pages, written for the use of students in the author's classes. Although free from originality or even completeness, it contains excellent short descriptions of the technique of the more common operative procedures used in gynecology.

The points involved in the various operations are briefly outlined; and the indications and contra-indications of the various methods are well stated.

The absence of illustrations seems to us a mistake. A. J. L.

**International Clinics, Vol. II.** Sixteenth Series, 1906. J. B. Lippincott Co., Phila. and London.

This recent volume of the series contains some articles of unusual excellence, many of which are of extreme practical interest. The contributors are for the most part American; several of the articles, however, are written by English, French and Italian clinicians.

The papers are grouped into various sections; those of the greatest general interest are contained, perhaps, in the sections of medicine and surgery. Two of the papers on pulmonary abscess and its treatment are especially timely, since the question of surgical interference in various pulmonary conditions is being widely discussed at the present time. The article of Moffit on Clinical Types of Persistent Vomiting, and that of Lloyd on Hysterical Neuroses of the Stomach are both instructive. Two other papers are devoted to the Treatment

of Nephritis: One by French from the medical, and the other Rovighi from the surgical standpoint. The article by the latter is a satisfactory brief presentation of our knowledge of decapsulation of the kidney, but we cannot help feeling that the author is over sanguine regarding the prospects of this mode of treatment. The paper by Rodman on Tumors of the Mammary Gland with special reference to their diagnosis, prognosis and treatment, although containing nothing original will repay the general practitioner for the reading. Another good surgical paper is that by Ross on the Principles of the Treatment of Fractures. In the section on obstetrics and gynecology there are two papers of common interest: One by Dorlan on The Female Perineum and Its Repair, another by Palmer on The Choice of Medicinal Agents for Topical Use in Gynecologic Practice. The remaining articles are, for the most part, of general therapeutic interest.

#### HEMORRHAGE IN THE NEWBORN.

H. McClanahan, Omaha (*Journal A. M. A.*, October 13), reports six cases of hemorrhage occurring spontaneously in the newborn, with histories; several cases of traumatic hemorrhage are also briefly reported. One of the spontaneous cases was a fatal hemorrhage from the lungs, which apparently is rather rare. He gives the principal facts in regard to hemorrhage of the newborn, its occurrence within the first few days after birth, its serious character in most forms, its apparent lack of any relation to hemophilia and the obscurity of its etiology. He thinks that it is probably due to some unknown specific cause producing a change in the blood vessels. In hemorrhages occurring later than the first ten days of life, he considers septic infection as the most likely factor. His experience, apparently, does not afford any special support to the theory of hereditary syphilis in these cases, though it is considered an important predisposing cause.

#### BENIGN CYSTIC EPITHELIOMA.

J. V. Shoemaker and L. Napoleon Boston, Philadelphia (*Journal A. M. A.*, October 13), report a case of this comparatively rare condition, of which they have been able to find records of twenty-four other cases in the literature. The growths occupied the right arm; the general condition was that of moderate secondary anemia, which improved under treatment. Microscopic examination made it evident that the neoplasms originated in the hair follicles and were examples of what has been described as tricho-epithelioma. Few cysts were present owing to the slight age of the tumors, they having existed but a few months. These benign tumors of the skin, the authors remark, have received but little attention from pathologists.

#### OAKLAND COLLEGE STUDENTS.

It is a pleasure to note that all of the students graduated from the Oakland College of Medicine and Surgery, recently, passed the examinations of the State Board most creditably. These were the first graduates from that institution and indicate that the promises of high standard, made by the faculty some four years ago when the College started, have been fully kept.